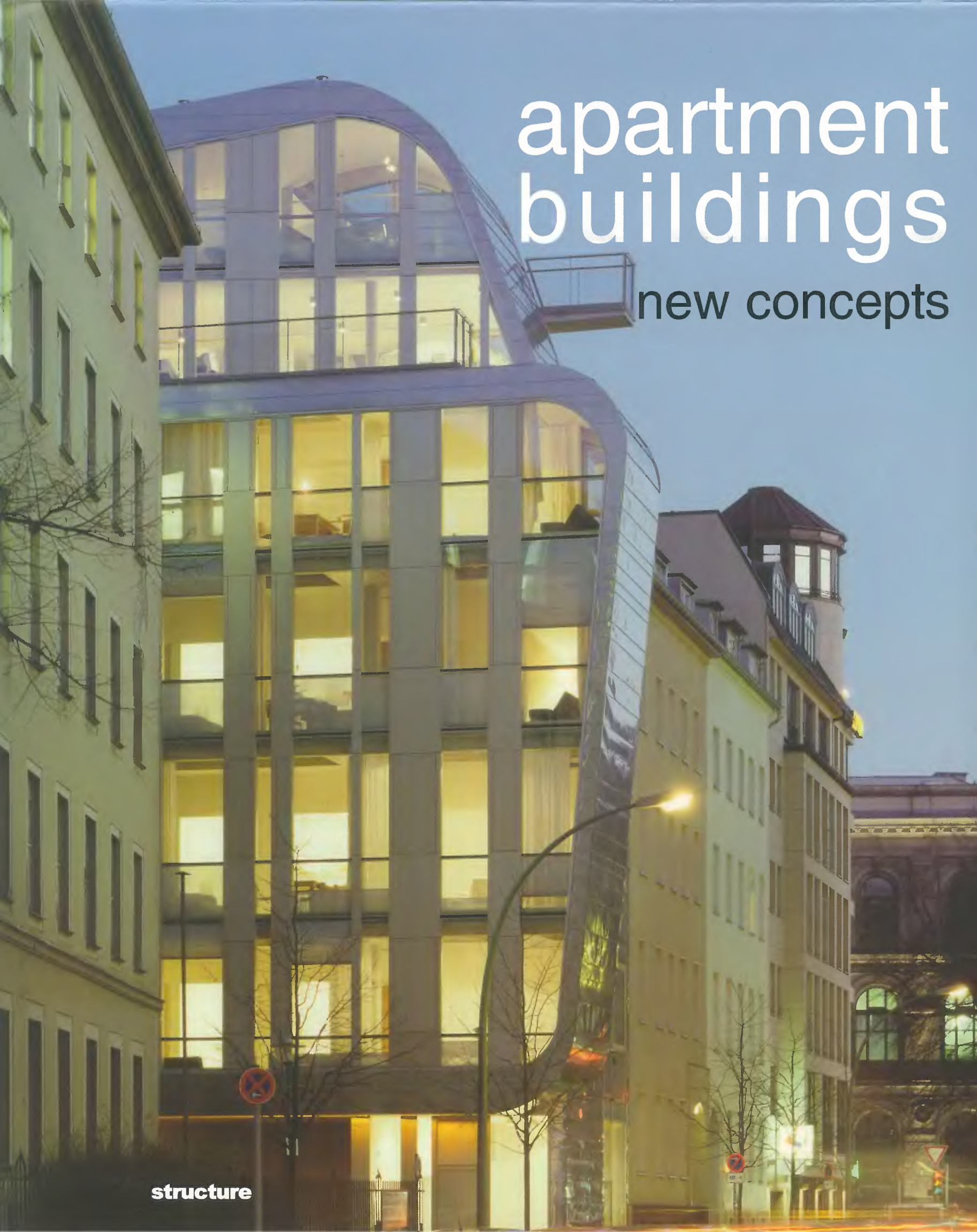


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in concepts
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buildings

new concepts in apartment buildings

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*Text: Contributed by the architects, edited
by Jacobo Krauel and Amber Ockrassa*

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er Christian Hauvette Claus en
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rank O. Gehry Janssen & Furkan
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n Deadline AVI Architekten: Butz
Jrig Phillippe Gazeau Mecanoo
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cis Soler de Architekten Cie. Frits
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tonen SWECO FFNS Arkitekter
dell Architects & Planners Toshio
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uana Alexander Reichel

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Deadline *Slender / Bender*

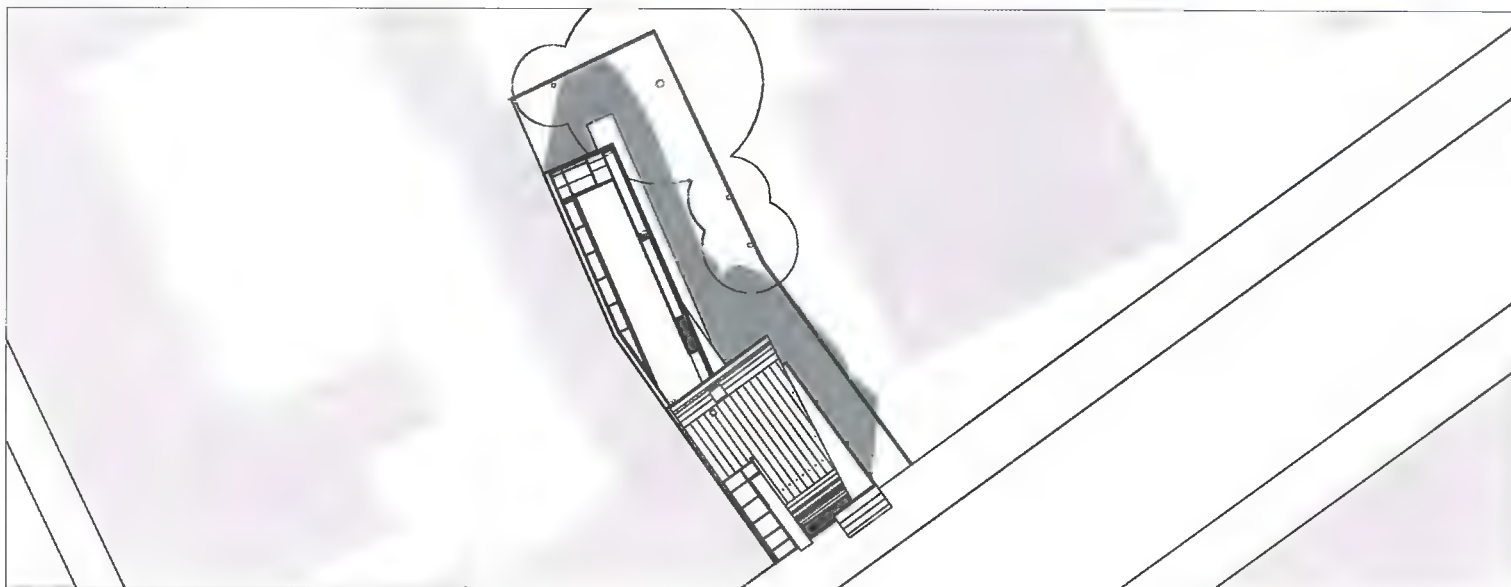
Berlin, Germany

"Bender" sits on a long narrow site in the center of Berlin that connects university buildings to the south with perimeter block housing to the north. The front half of the site was an overgrown bomb site, with a slender four story building surviving at the rear. The project, in which the architects were also the developers, involved a first phase of renovating the existing building and a second phase of constructing a new building at the front, with the finished project creating a complex interweaving of the old and the new. Bender is also unusual because it integrates a mixture of functions on a very small site. The project includes short-stay 'miniloft' apartments, office space, long-term apartments, a shop and parking.

In the first phase the architects completely transformed the narrow original wing by renovating the apartments to create six minilofts, small apartments that function as comfortable and independent alternatives to hotel rooms. They were also designed to function as office space, allowing the building to react easily to changes in demand. On top of these, the architects constructed an award-winning two-story family "house" with a roof garden.

The second phase is rooted in the first, and provides access to two floors and the roof-top house. Its main element are three bent stainless steel ribbons embrace the existing rear wing and navigate between the buildings on either side. The horizontal outward thrust of the stainless steel ribbons that unify the project are counterbalanced by a vertical rhythm that runs through the whole. The resulting building acts as a hinge within the urban fabric, striving towards a future that is grounded in the past.

Photographs: Matthew Griffin
www.deadline.de





Bender acts as a hinge within the urban fabric by connecting the free plan university buildings to the south with the perimeter block housing to the north. Its eloquent set of façade details emphasizes both the verticality and the unity of the building.



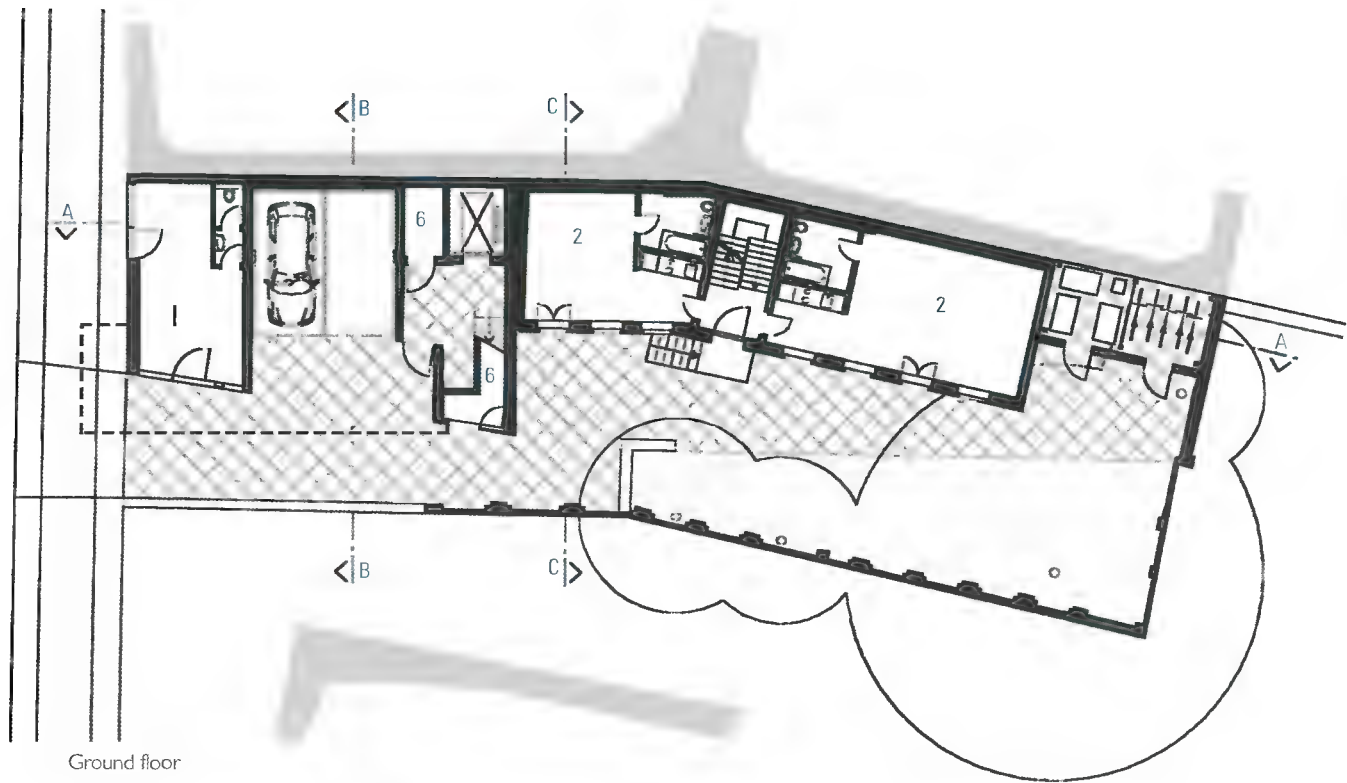






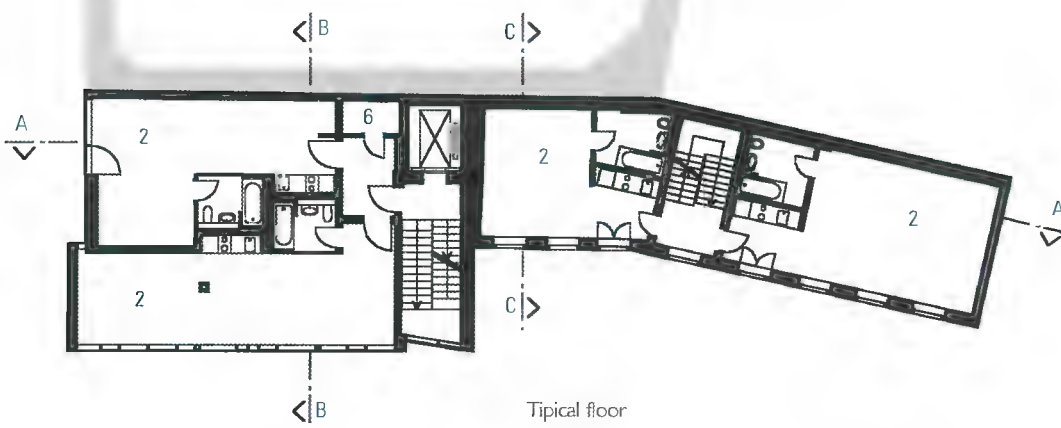
The generous high ceiling rooms feature a brushed cement floor, an exposed concrete ceiling and an elegant opaque glass wall separating the living space and the bathroom. These flexible spaces can function as mini-apartments or office space, according to changes in demand.





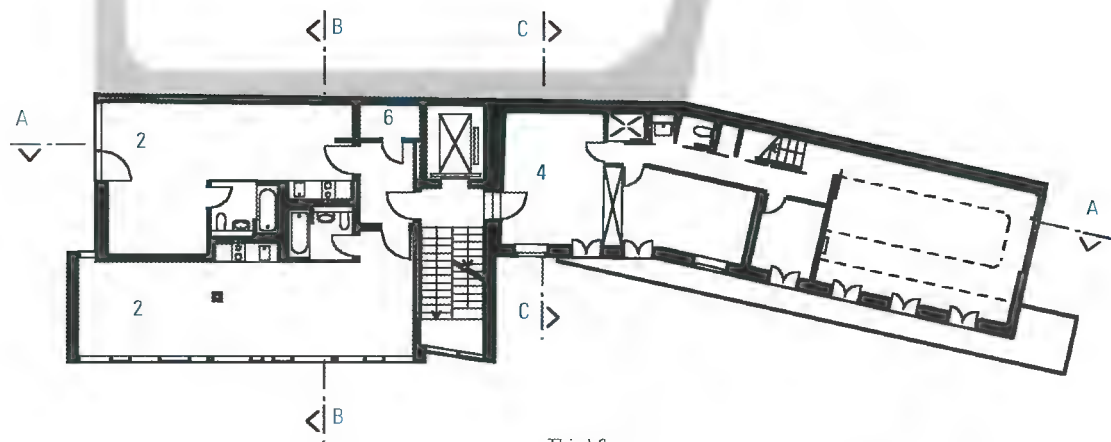
Ground floor

- | | |
|-------------|-----------------|
| 1. Shop | 4. "House" |
| 2. Miniloft | 5. Roof terrace |
| 3. Office | 6. Storage |



Typical floor

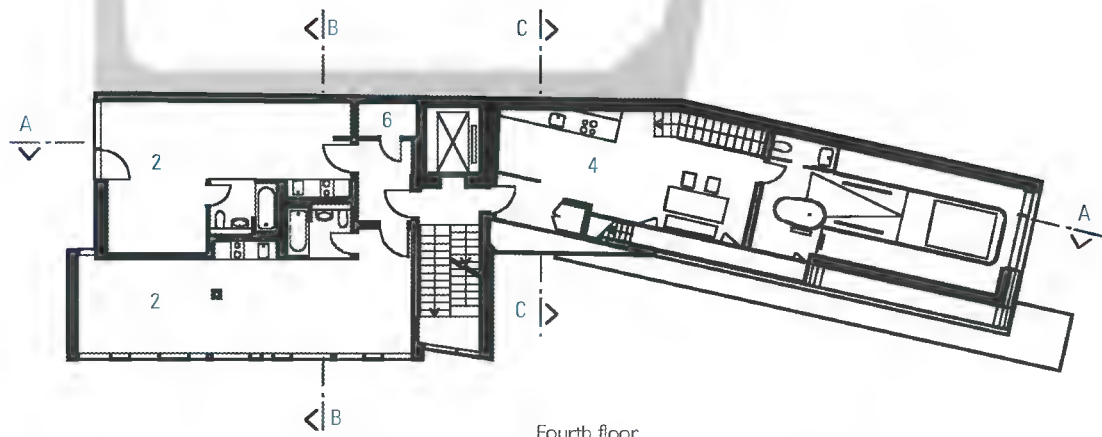
- | | |
|-------------|-----------------|
| 1. Shop | 4. "House" |
| 2. Miniloft | 5. Roof terrace |
| 3. Office | 6. Storage |



Third floor

- 1. Shop
- 2. Miniloft
- 3. Office

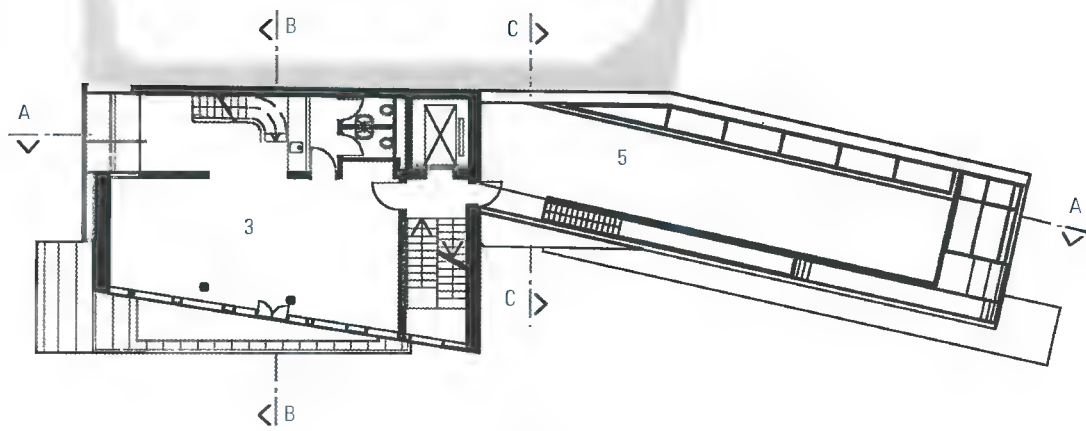
- 4. "House"
- 5. Roof terrace
- 6. Storage



Fourth floor

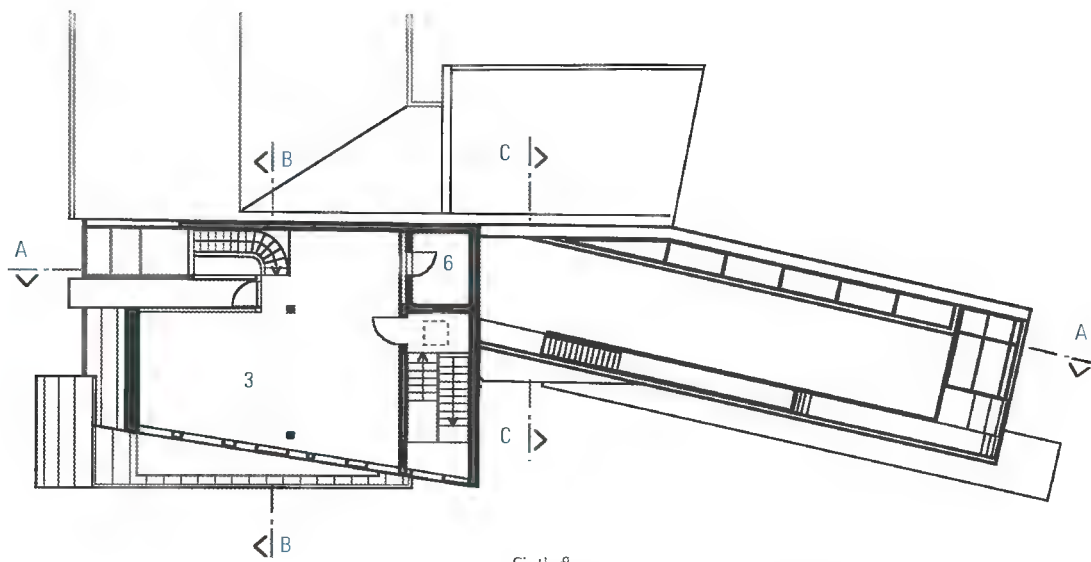
- 1. Shop
- 2. Miniloft
- 3. Office

- 4. "House"
- 5. Roof terrace
- 6. Storage



Fifth floor

- | | |
|-------------|-----------------|
| 1. Shop | 4. "House" |
| 2. Miniloft | 5. Roof terrace |
| 3. Office | 6. Storage |

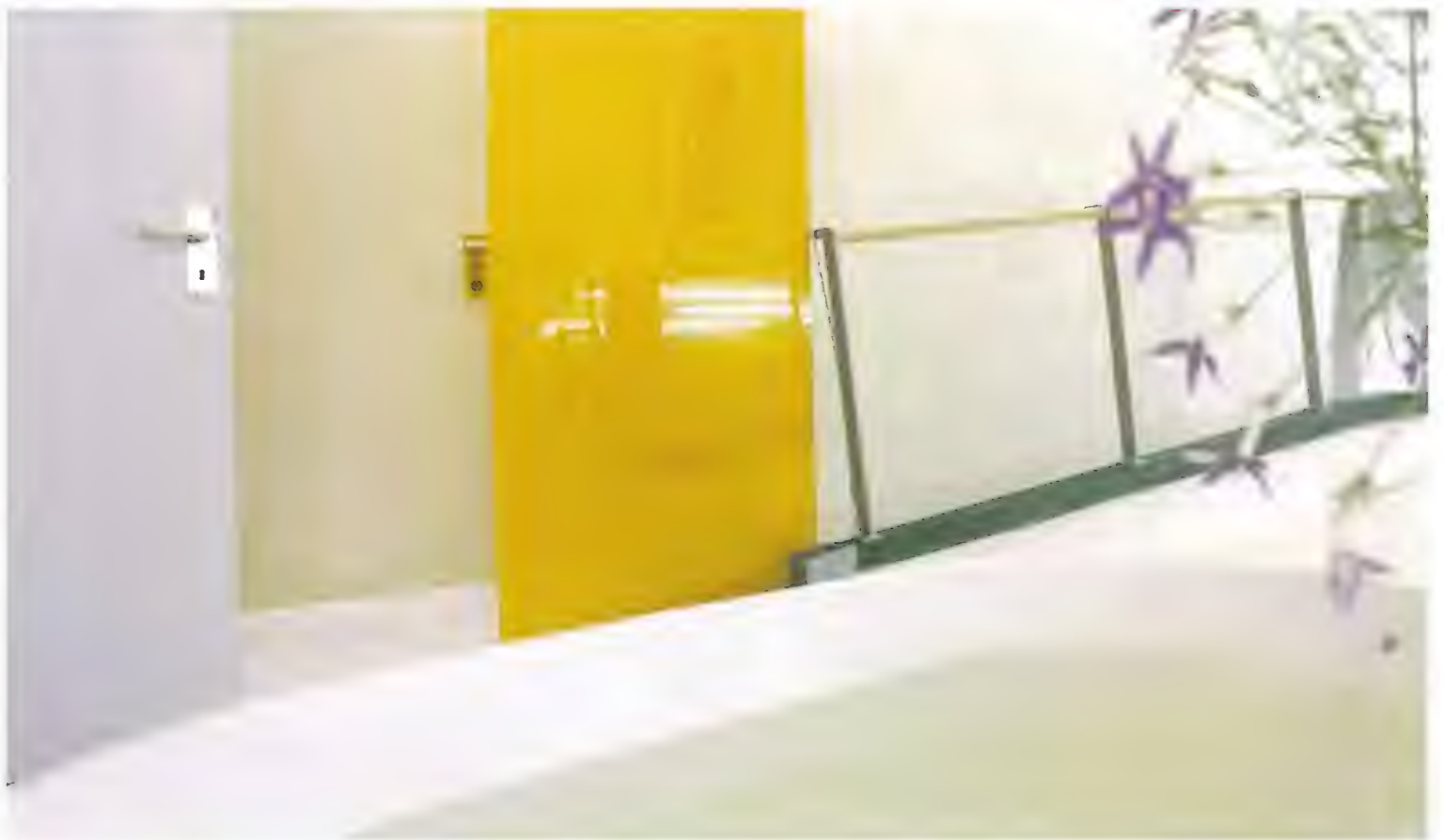


Sixth floor

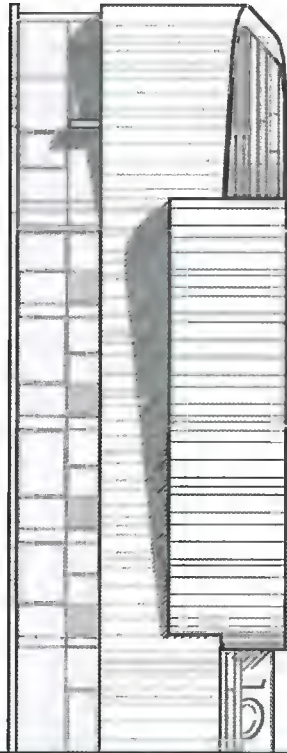
- | | |
|-------------|-----------------|
| 1. Shop | 4. "House" |
| 2. Miniloft | 5. Roof terrace |
| 3. Office | 6. Storage |



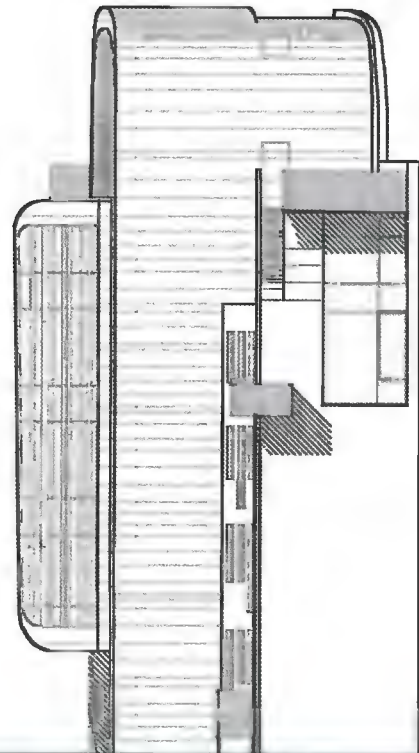




Street elevation



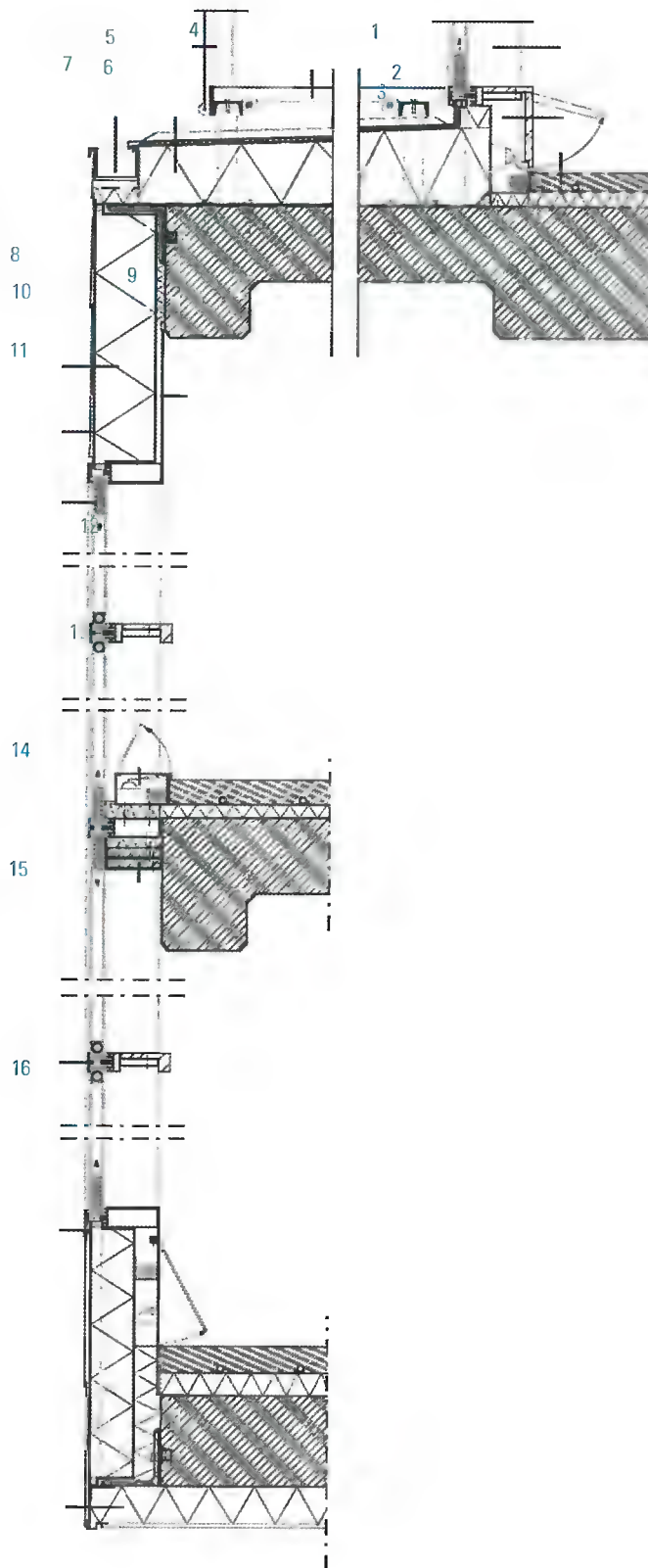
East elevation



South elevation

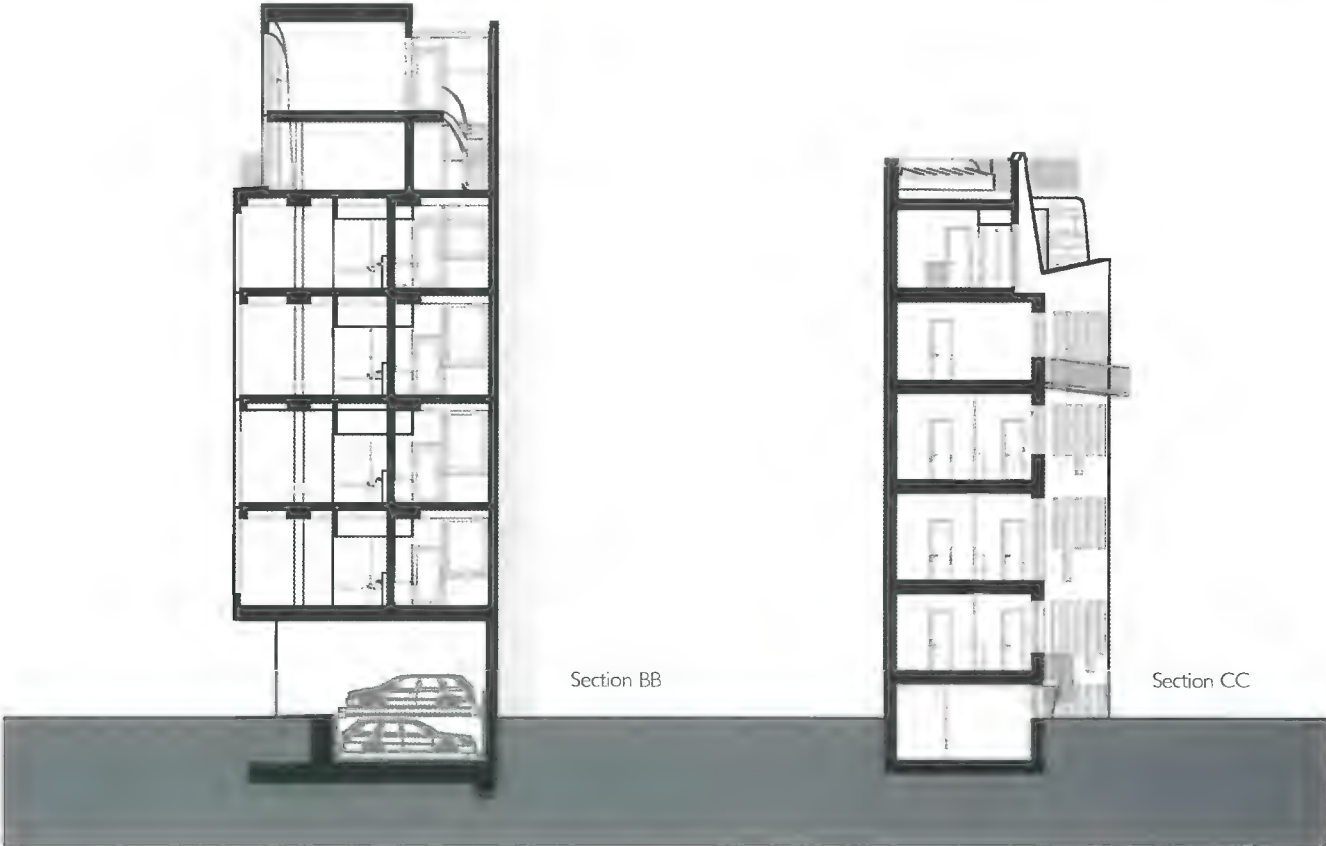






1. Curtain Wall: Anodized Aluminium, "champagne" EV 2
2. Cable conduit: Flap: North American walnut wood, oiled
Conduit: Aluminium
3. Floor: Sealant "Lithofin Fleckstop"
Sanded white cement floor
"Baseboards" - Aluminium angles 15x15 mm
Floor heating
Soundproofing and insulation
Concrete sub-floor
4. Balcony: Aluminium flooring planks on neoprene strips
Steel sub-construction, galvanized and painted in DB 702
5. Chain link balustrade
6. Roof system: Standing seam roofing, stainless steel 0.4 mm
Polymer-bitumen roofing membrane
"Foamglas" insulation raked 160 - 210 mm glued with bitumen
Secondary bitumen roofing membrane
7. Gutter: Stainless steel 0,4 mm
8. Curtain wall insulation panel WLG 025
9. Anodized aluminium trim, "champagne" EV2
10. Stainless steel cladding, 0.4 mm
11. Glazing: Double glazing with pleated blind sun shades between the glass panes of:
Transparent woven cloth with exterior aluminized backing
Electric motors integrated in the sealed unit's upper spacer
Anodized spacers "champagne" EV2
12. Cable conduit: Anodized Aluminium, "champagne" EV 2
Soundproofing
13. Fireproofing: Extra insulation
"Promatect" fire protection lining, 2 x25, F90 on a fitting panel
Anodized Aluminium trim, "chanpagne" EV2
14. Window sill: Sill - North American walnut wood, oiled
Transom - anodized aluminium "champagne" EV2
with integrated black anodized Aluminium cover caps
15. Drainage: Aluminium shadow gap profile
16. Insulation: Stone wool insulation panels
Reinforcement fabric, white rendering

The project involved renovating an existing four story building and designing a new building facing the street. The facade of the new building is unified by vertical anodized aluminum details, and three bent stainless steel ribbons reach back from to new construction to embrace the existing building.



BKK-3 *MISS Sargfabrik*

Wien, Austria

Located in Vienna, MISS Sargfabrik is the continuation of the Sargfabrik housing complex, which was awarded the 1996 Austrian Adolf Loos Prize. The original project presented community-oriented ideas that integrated culture and housing. The project takes up ideas from the previous complex as well as taking its roots from the tradition of Viennese social housing. The architectural concept was to create an evolutionary design: a space for development. The building is intended to satisfy the multiple and varying needs of the urban human being in the 21st century by setting new standards in architecture.

Flexibility is a key element in the sense that attention has been paid to individual ideas in each apartment in terms of design and detail. Each space and room offers a different kind of experience. "Living the good life" in sculptural space and habitable landscapes is no longer a privilege of the rich. Spaciousness and comfort are the norm, achieved through the creative and imaginative use of space.

Ecology, low energy, heating hidden in the walls -protecting the eye from unattractive radiators- are part of the standard.

The main idea of the complex is to offer retreat as well as openness; as seen not only in the glass facades, which provide natural light and transparency, but also in the figurative sense of openness of solutions regarding the community. The complex's main nucleus is the shared area, which combines a library, high-tech community kitchen, TV-room, office, laundry room, and a recreation area with an organically shaped sofa.

MISS Sargfabrik is distinguished by heterogeneity. There are 39 living units including housing for teenagers, three units for wheelchair users, and flats in combination with home-offices, with a private and a public entrance.

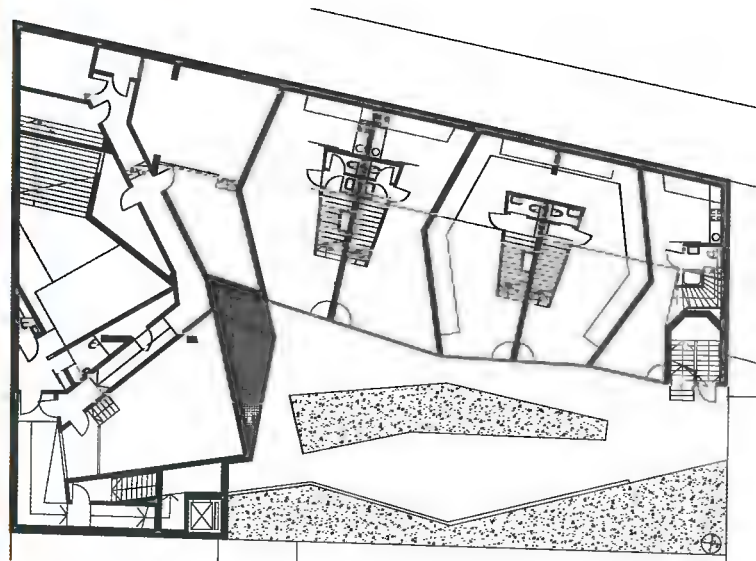
Photographs: Hertha Hurnaus



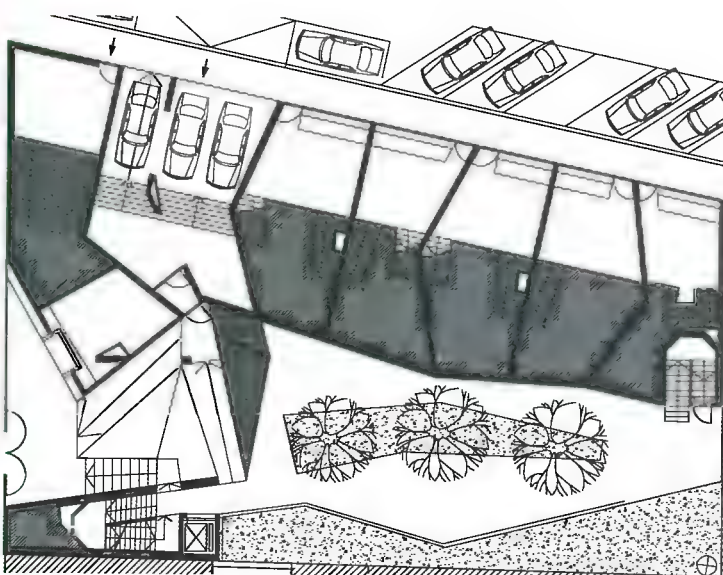




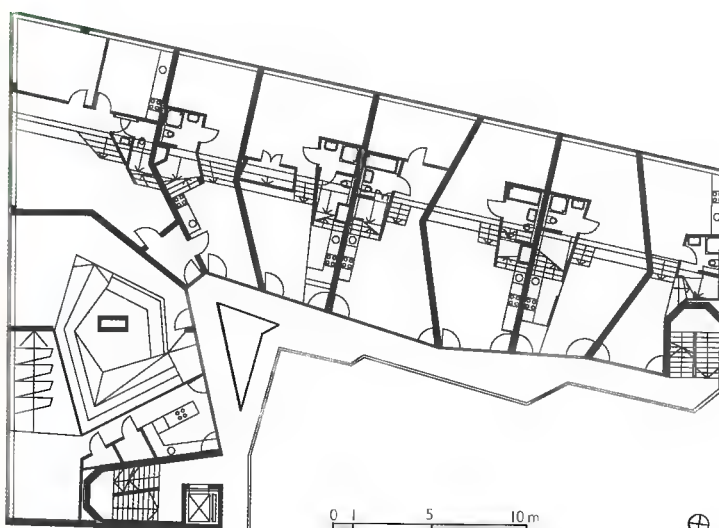




First floor plan



Second floor plan



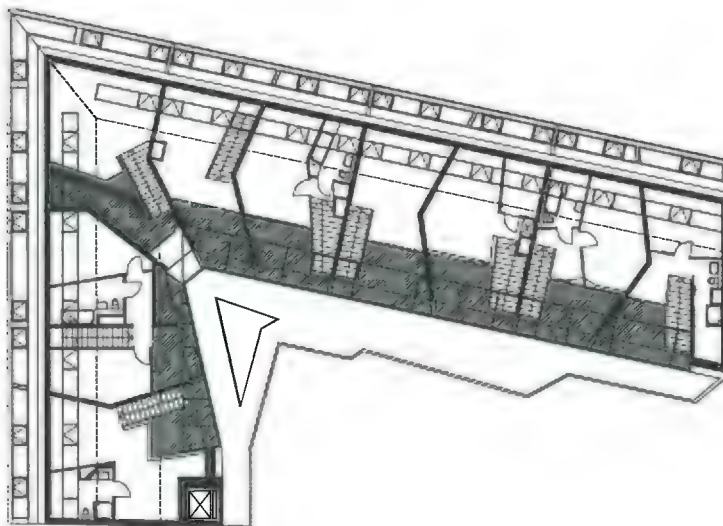
Fifth floor plan



Sixth floor plan

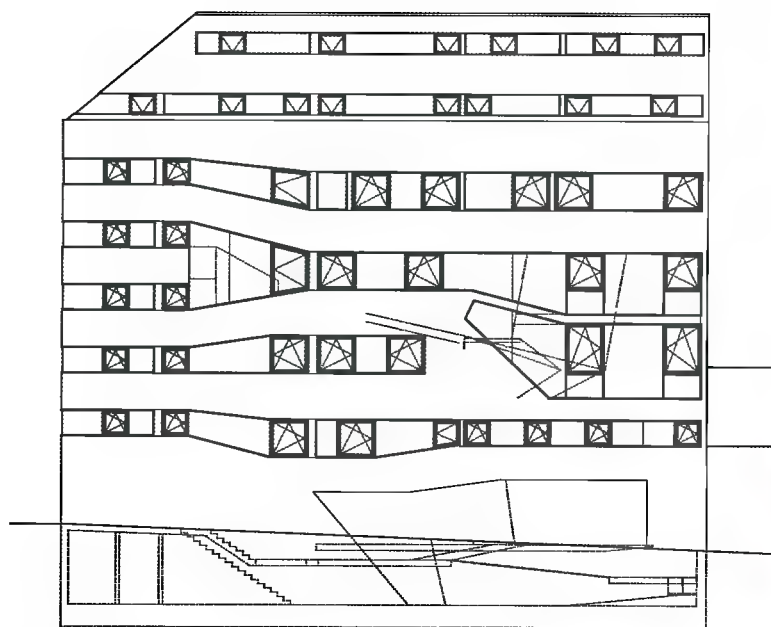


Seventh floor plan



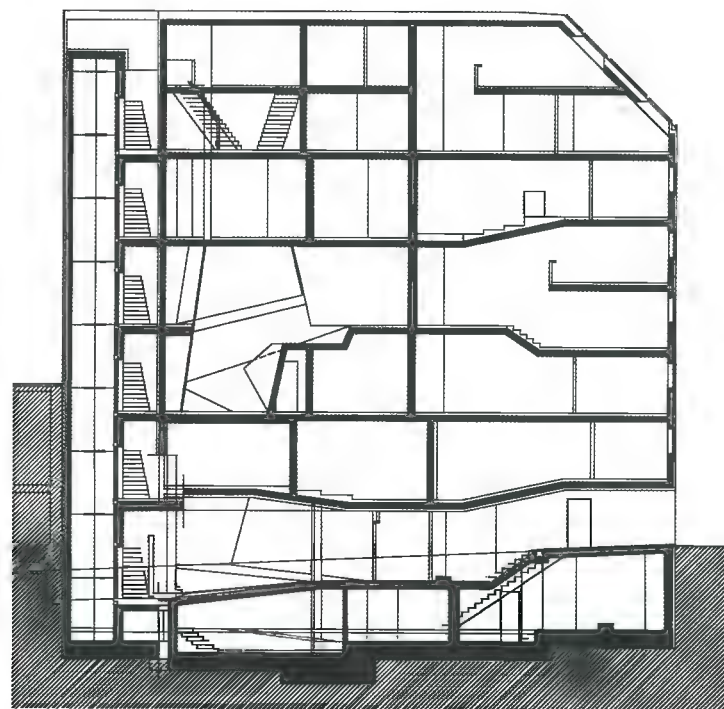
Ninth floor plan



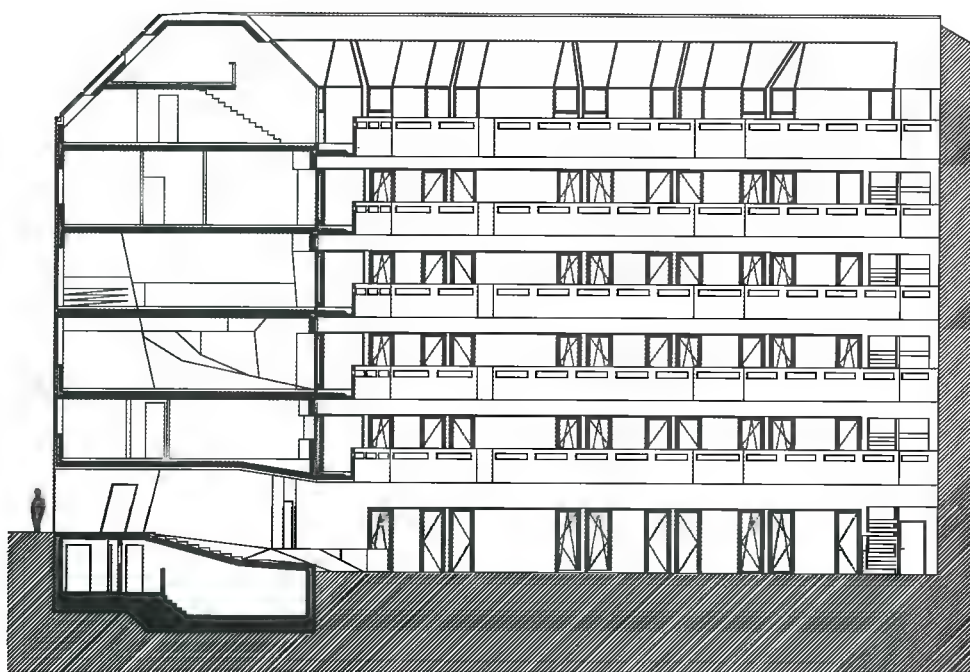


West elevation

0 5 10 m



North South section

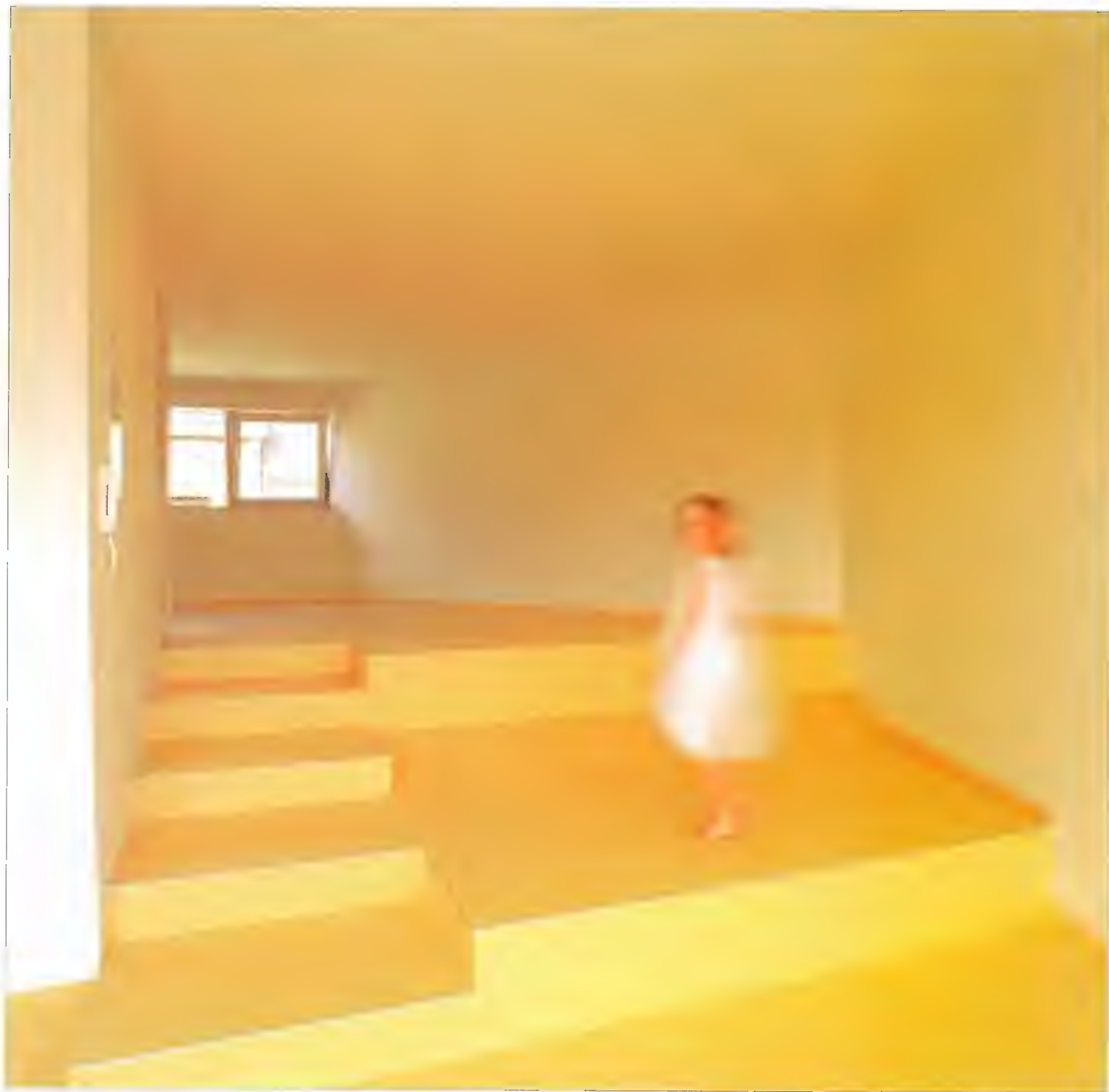


East West section

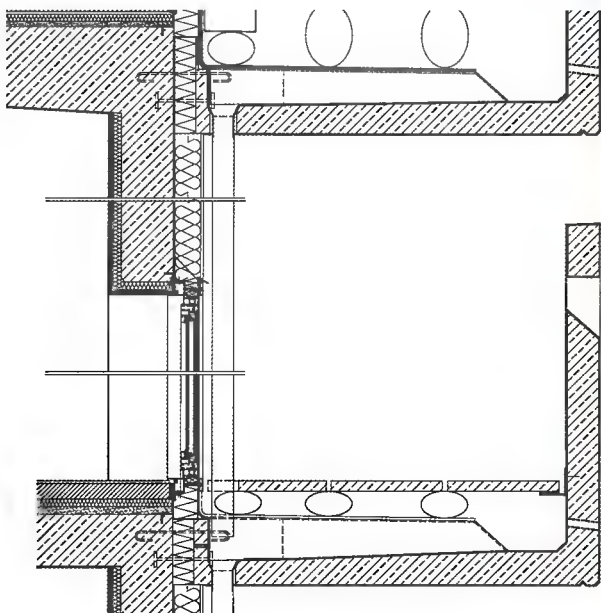
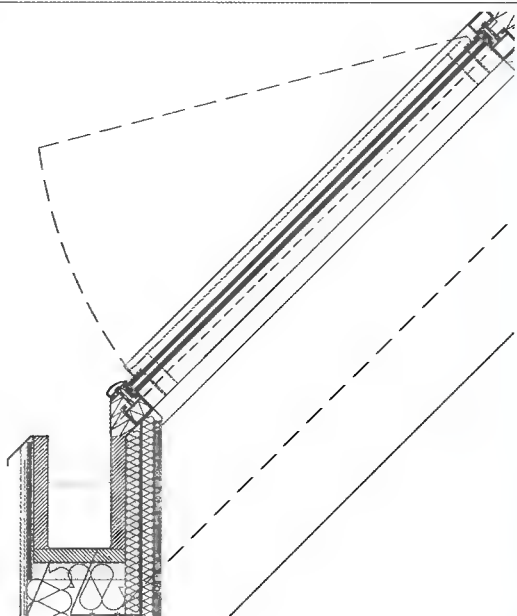
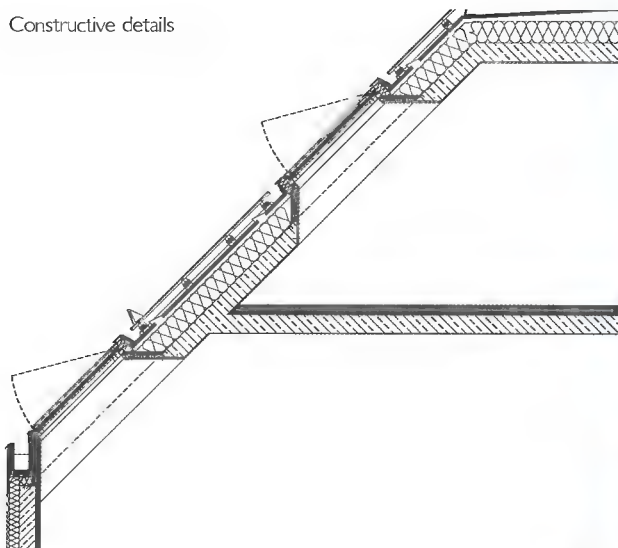
The varying window sizes and shapes creates distinct perspectives on all sides of the building. Likewise, this asymmetric exterior produces highly individualized interior volumes: no two apartments are alike.



Following the philosophy that new, cheap construction does not have to mean smaller, narrower living spaces, the project offers the luxury of high ceilings also in small apartments of between 50 and 60 m². The average ceiling height ranges between 2.25 and 3.12 meters.



Constructive details







MVRDV 100 Wozoco's

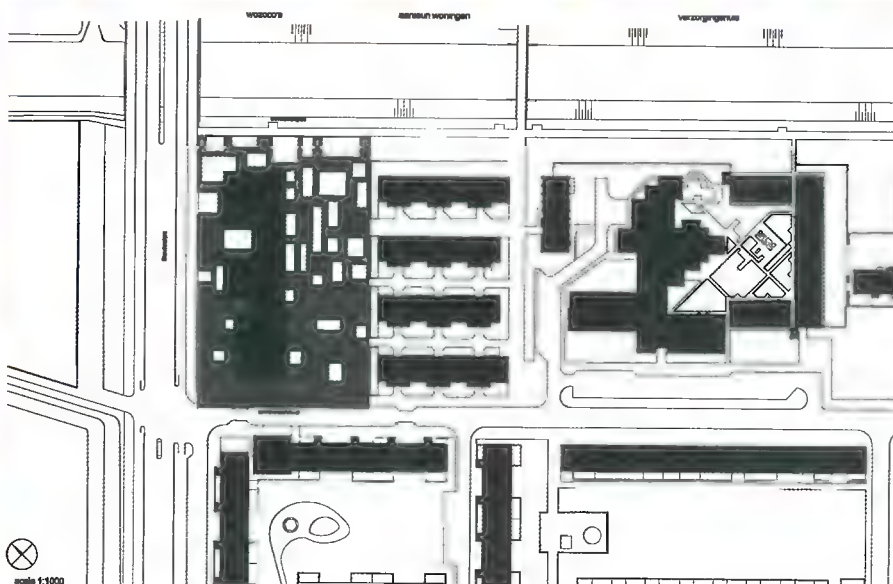
Amsterdam-Osdorp, The Netherlands

A block of 100 apartments for persons over 50 years of age was to be built in a garden city situated in the west of Amsterdam (Westelijke Tuinsteden), an area whose green spaces are threatened with continually increasing occupation density. The apartments were to offer a higher degree of independence than is usual in homes for the elderly, and could in the future also accommodate younger residents. The current zoning envelope and the north-south orientation of the building made it impossible to distribute the 100 apartments in a single block, which could only take 87. The remaining 13 were suspended from the north facade of the block using steel cantilever girders, in such a way that each hanging apartment receives the sun on its east or west facade (in the Netherlands, it is not permitted to build north-facing apartments). The overhanging units placed along the north facade give it a striking presence in the street and the east-west orientation of these units combines with the north-south orientation of the apartments in the interior of the block.

Each gallery of the block has a different perspective, and the different window positions, balcony sizes and balcony materials give the flats their own character. For sound insulation, the party walls were built 8 cm thicker than was structurally necessary, and this extra thickness was used to connect the cantilever trusses without having to increase the weight of the load-bearing walls. Sound and fire regulations made it necessary to clad these trusses.

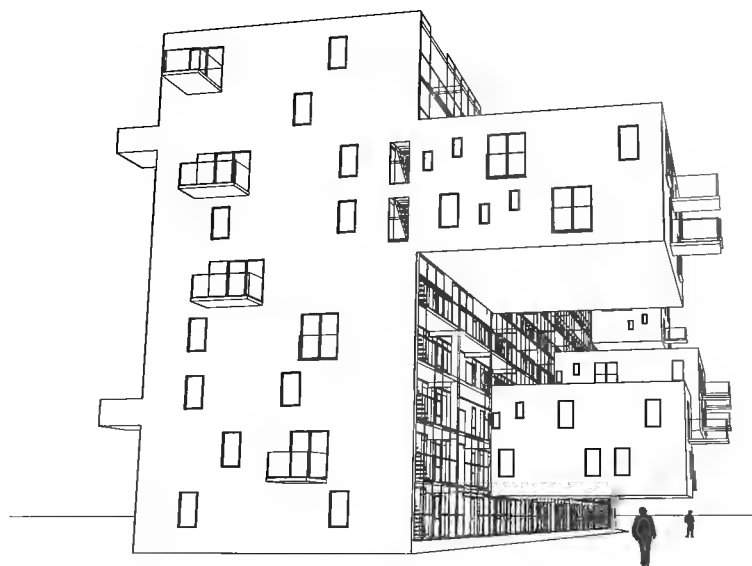
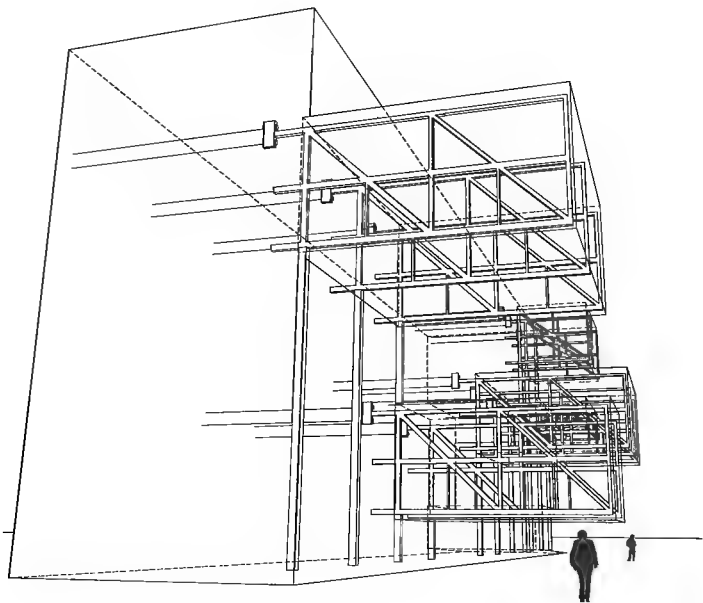
The solution to this project means that the ground floor spaces characteristic of these neighbourhoods are left as open and green as possible, and a prototypical increase in density is achieved for this area.

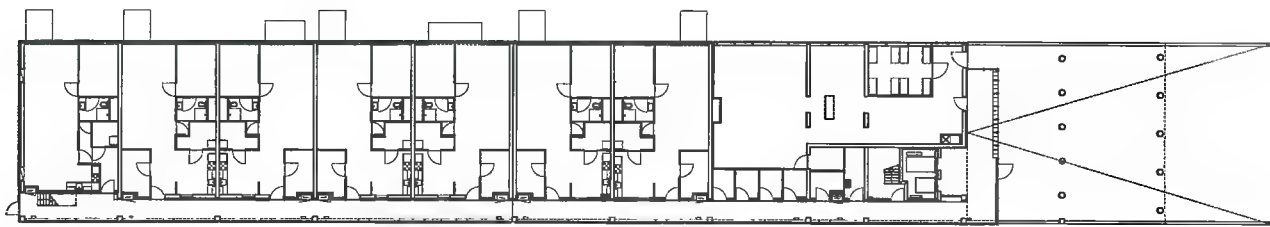
Photographs: Christian Richters



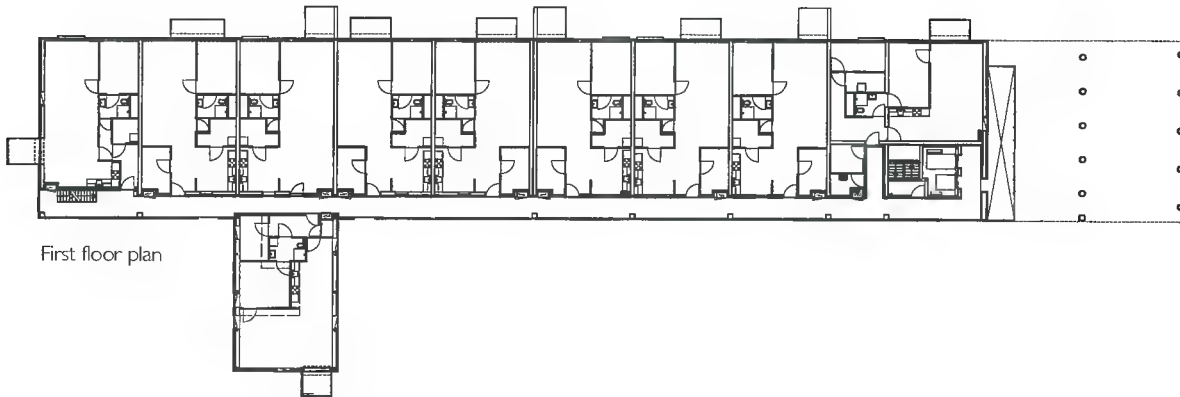




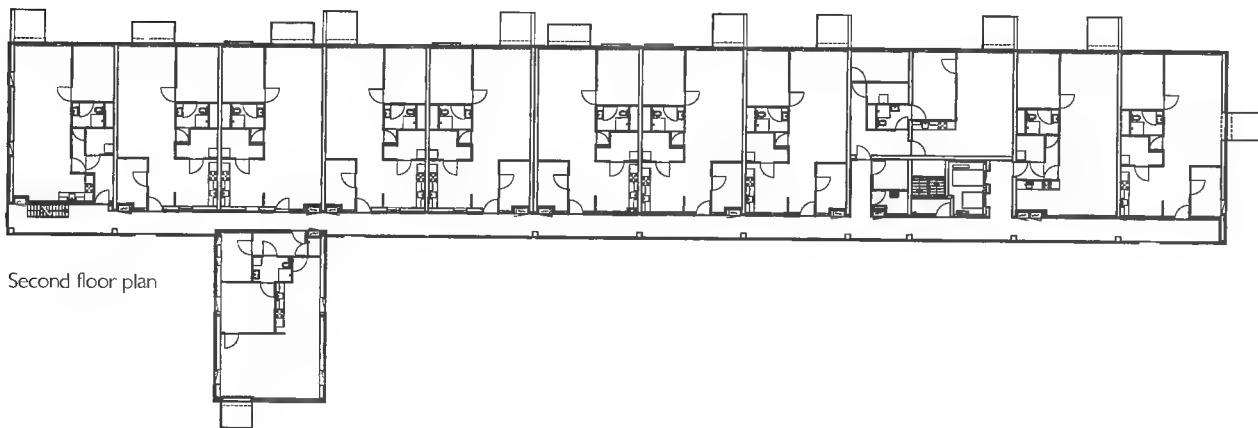




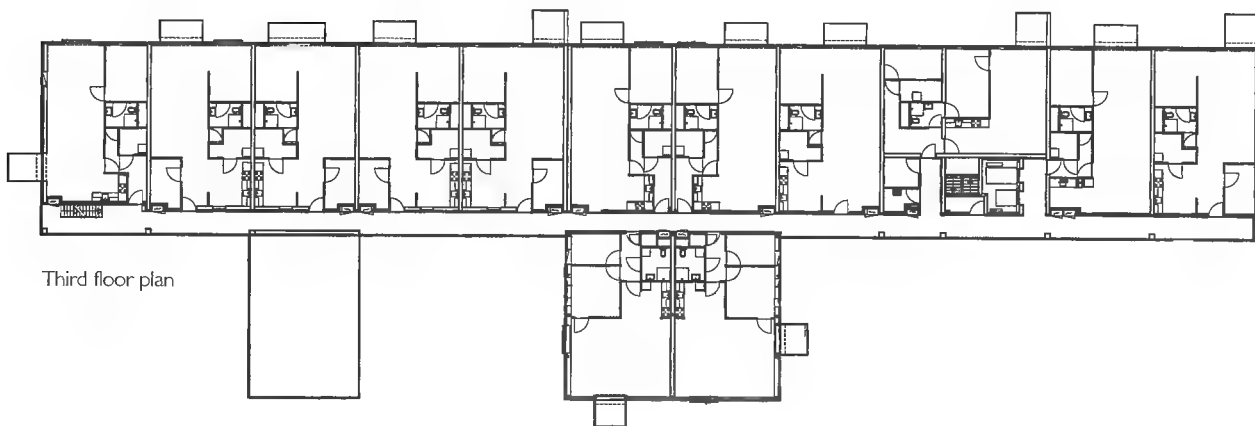
Ground floor plan



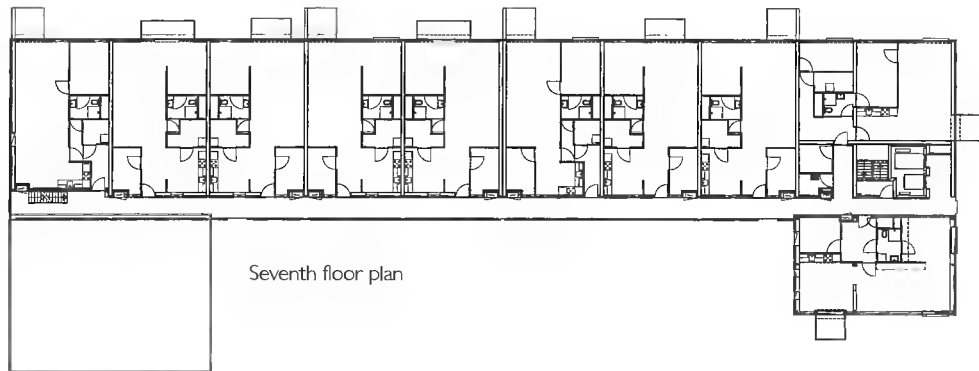
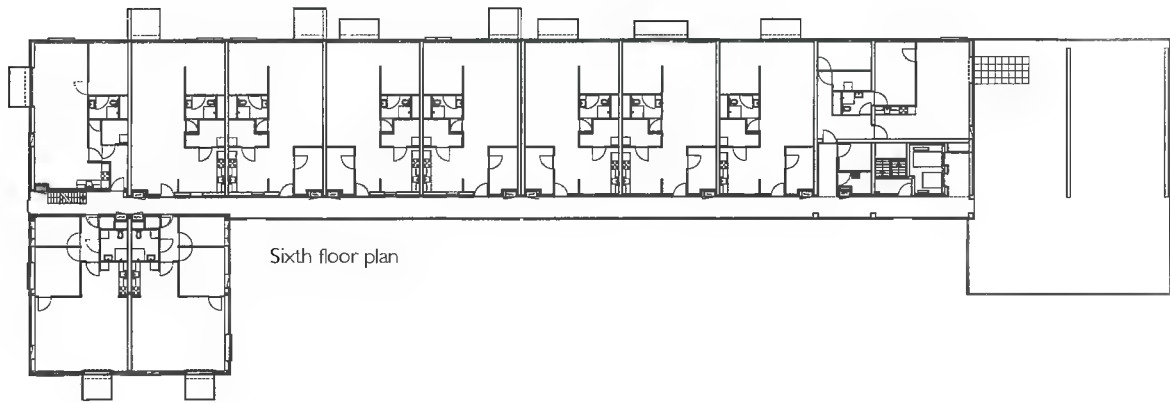
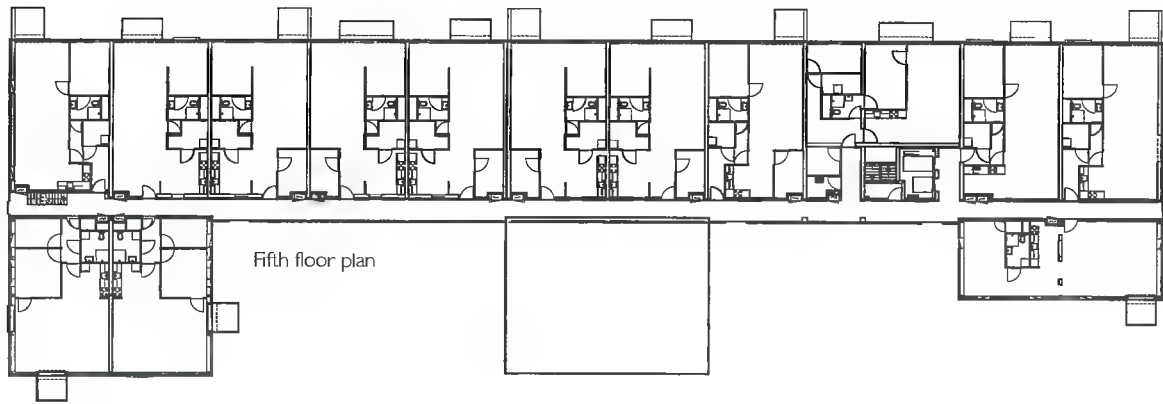
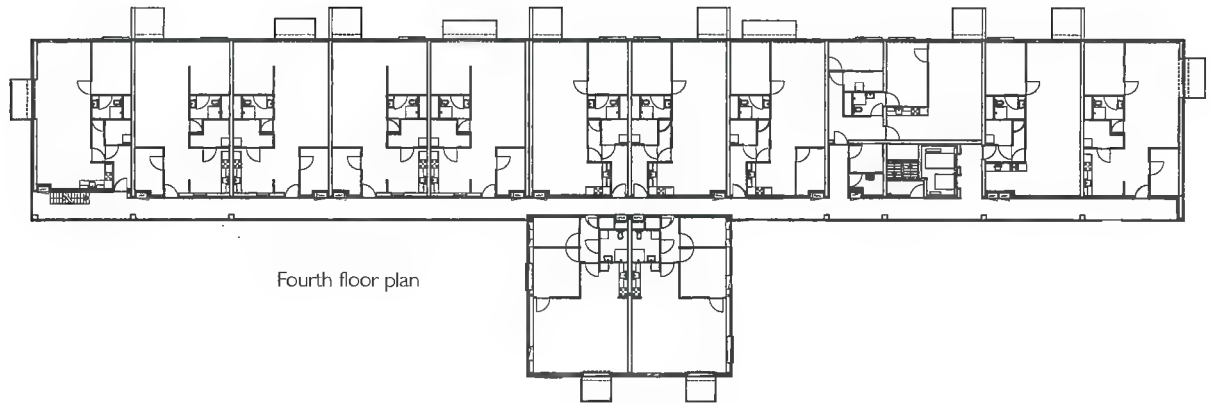
First floor plan



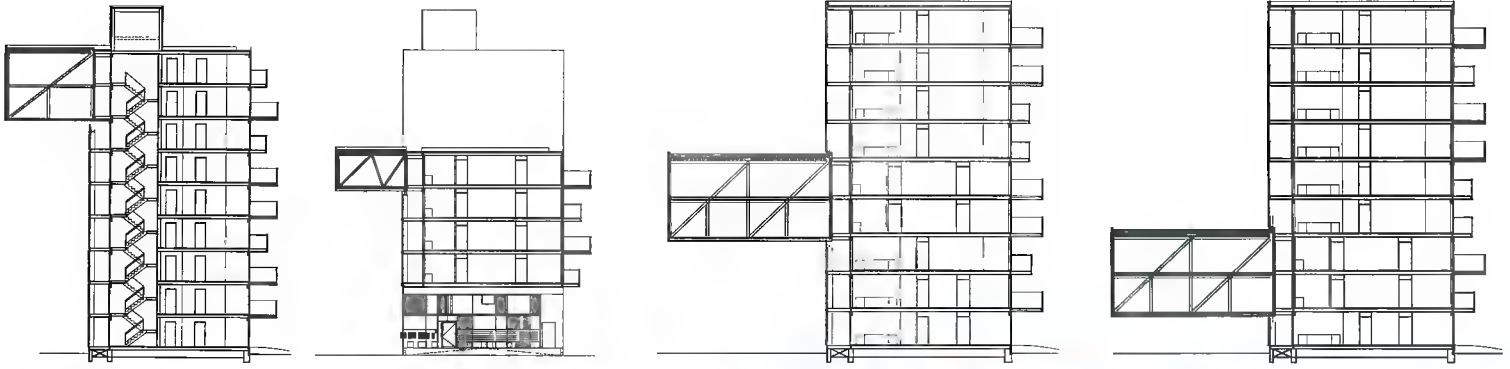
Second floor plan



Third floor plan







Cross sections

A great wealth and variety of forms and materials was necessary in the design of the openings in order to provide the individuality required by each apartment.

Thirteen of the one hundred apartments are completely suspended from the north facade by means of a system of triangular metal beams that absorb the large overhang.

Front view of the main facade, characterised by the unusual cast iron curtain, which as it sways endows the whole scene with fluidity and dynamism. The detail below shows how the individual links of the curtain are joined together.



Maki and Associates *Hillside West*

Tokyo, Japan

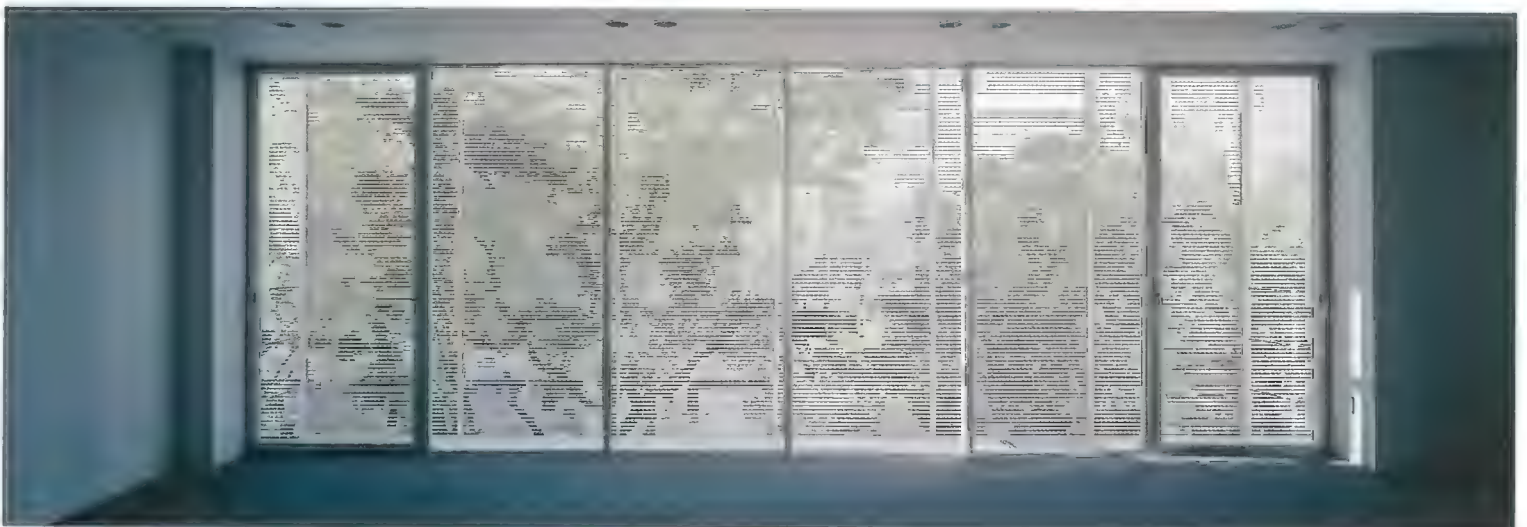
Hillside Terrace is a complex composed mainly of apartments and shops. It is located in Daikanyama, not far from Shibuya Station, a major terminal in central Tokyo. The first phase of the project was initiated at the end of the 1960s and there have been several subsequent phases leading up to Hillside West, which was constructed in 1998.

Hillside Terrace was a creative experiment in urban design, aimed at constructing a townscape using the architectural language of modernism. The most recent scheme - Hillside West - follows this philosophy in its pursuit of the creation of an informal realm within an urban setting.

The Hillside West site lies between Kyu-Yamate Avenue to the front, and a quiet residential street in the back, with a 5.5 meter difference in level between the two streets. The complex is laid out in three main volumes, each with its own specific character and each adopting the height of the neighboring developments. Different colors ranging from white to gray, and different materials such as aluminum, glass and Corona mosaic tile have been used on the building's surfaces. The rear space between the individual tracts has been laid out as a small garden, which forms a transition between the courtyard areas at the center of the complex and the residential street. There is a semi-public route threaded between the three buildings that enables pedestrians to cut through the site to the residential street at the rear.

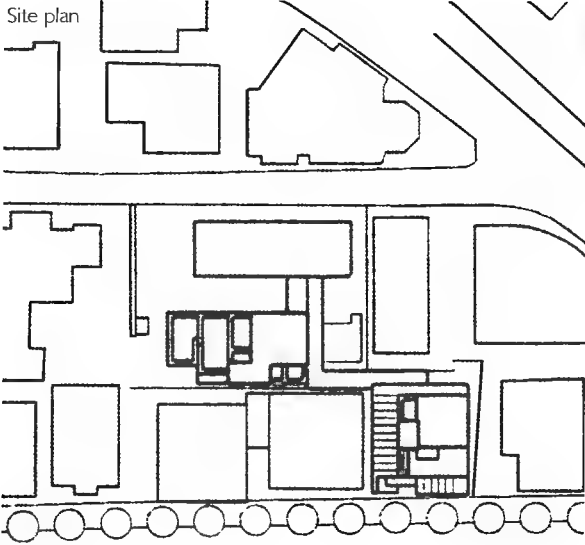
In front of the living areas there is a louvered screen suspended at a distance of 75 cm from the facade. This screen enhances the private character of these areas by acting as a visual filter, and it also provides shading for the balconies on this face. The screen is made of aluminum tubes which not only allow the penetration of fifty per cent of the light, but which also seem to reflect the light into the depths of the rooms beyond, thereby creating a bright and airy interior atmosphere.

Photographs: Toshiharu Kitajima, Shinkenchiku-sha

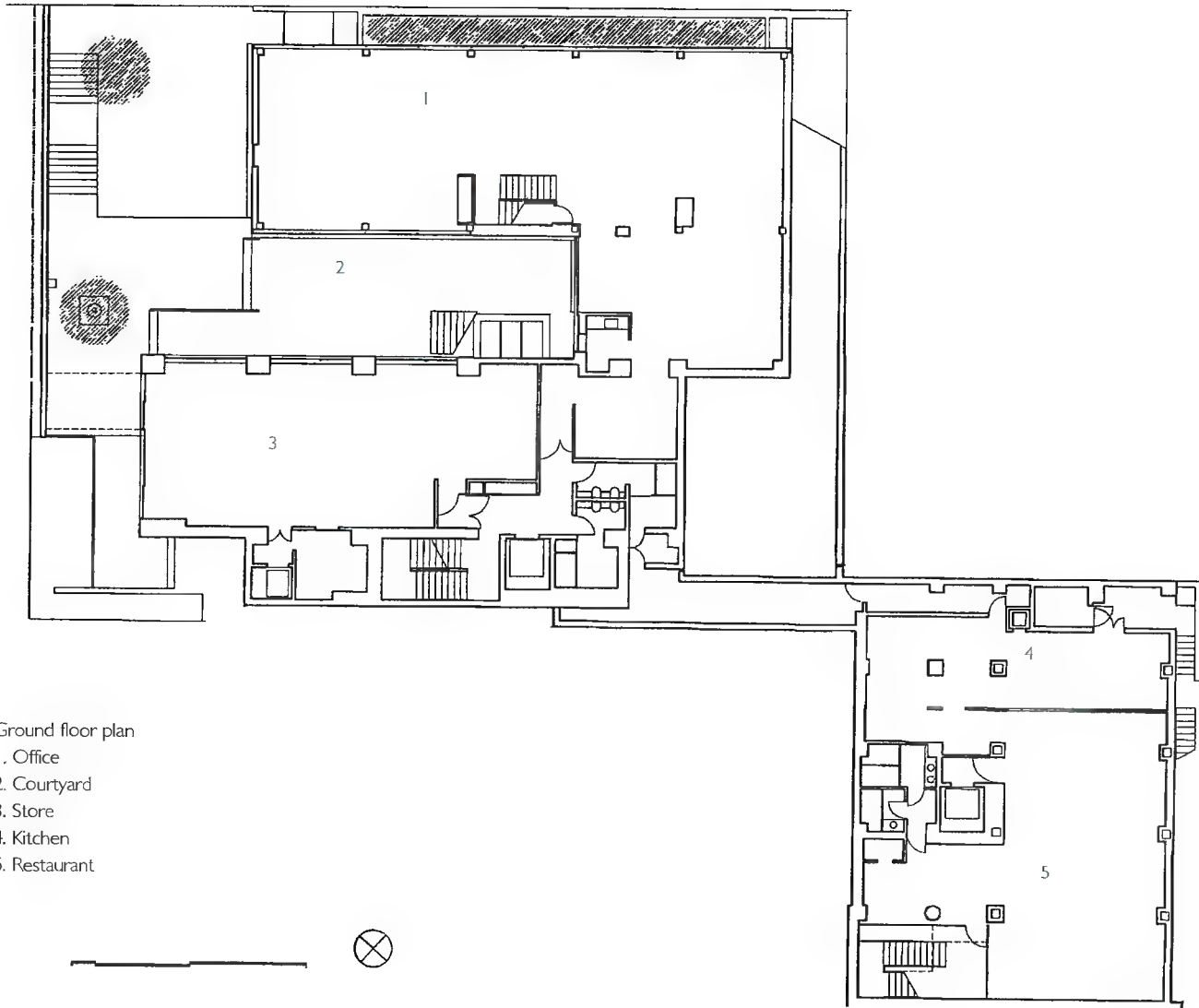




Site plan



The curtain facade construction consists of 15 mm diameter aluminum tubes at 30 mm centers. The aluminum tubes are riveted to a framework suspended from the steel load-bearing structure of the building. The true facade behind the screen consists of room-height aluminum casement elements.



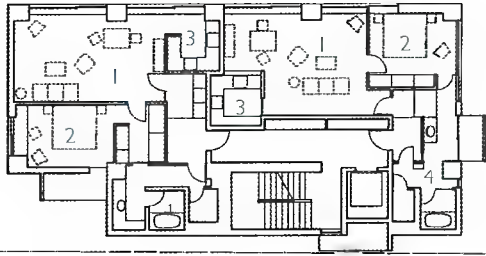
Ground floor plan

- 1. Office
- 2. Courtyard
- 3. Store
- 4. Kitchen
- 5. Restaurant

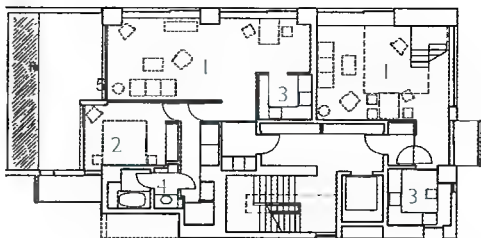
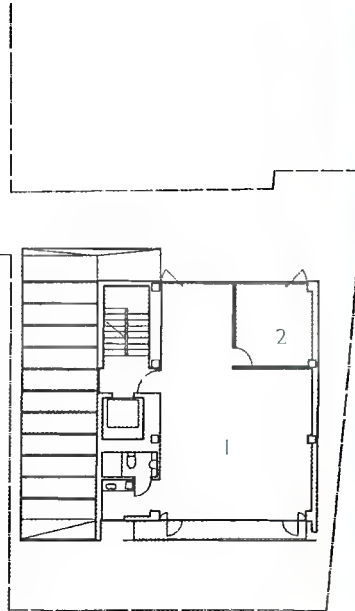




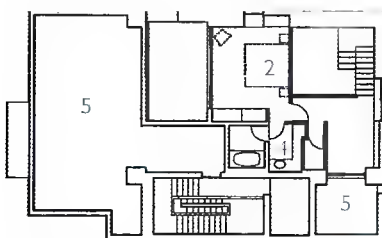
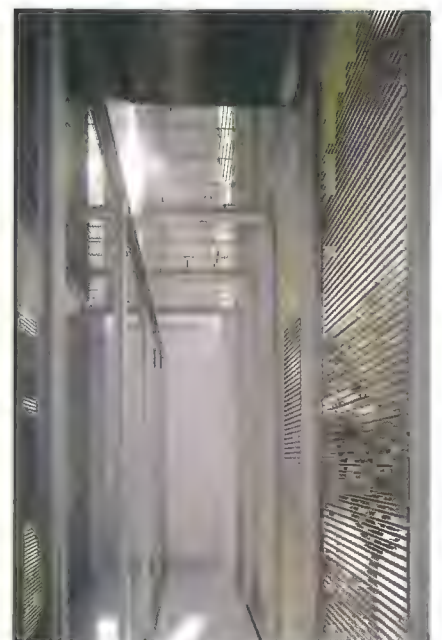
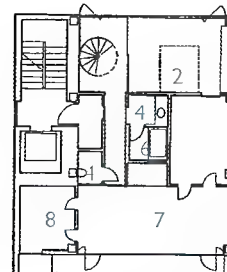




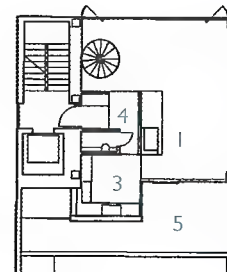
Third floor plan
 1. Living Room
 2. Bedroom
 3. Kitchen
 4. Bath



Fourth floor plan
 1. Living Room
 2. Bedroom
 3. Kitchen
 4. Bath
 5. Roof Terrace
 6. Closet
 7. Living Room
 8. Library



Fifth floor plan
 1. Living Room
 2. Bedroom
 3. Kitchen
 4. Bath
 5. Roof Terrace





Frank O. Gehry *Goldstein Sud Housing Development*

Frankfurt, Germany

The project is located approximately 8 kilometres of downtown Frankfurt at the eastern edge of a public housing zone known as Goldstein South. The site is the last undeveloped public housing tract in the area and provides connections to a community sports field, a future tram stop and educational facilities. The programme comprises a semi-public park and 162 units of housing with related parking areas, a social centre and neighbourhood retail. The project distributes the park along the natural circulation paths for use by the community. The north/south axis connects the Goldenstein Park with the Greenbelt, while the east/west axis connects the Goldstein South housing with the future tram stop and educational facilities, thereby serving these daily needs. The two paths are recognisable by distinct types of landscape materials: the north/south path is planted with a variety of trees to create a natural setting connecting the park and the Greenbelt. On the other side, the east/west transportation path is organised within a linear grid of flowering trees with hardscape paths that accommodate frequent bicycle travel.

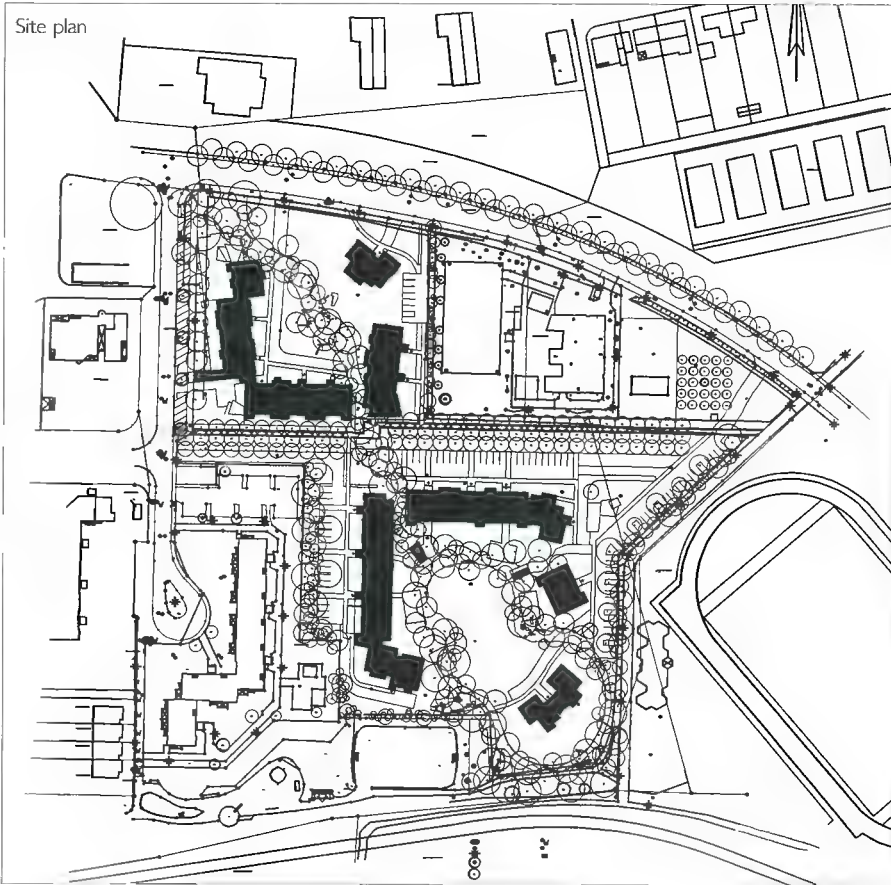
The apartment blocks are organised in a manner that creates partially enclosed courtyards. These courtyards are further divided by paths, terraces and private gardens to provide a variety of spaces. The internal plans of the housing units vary according to their disposition relative to site amenities and orientation. Three basic strategies yield a variety of plan typologies. The units that are linear along the east/west axis have south exposure for living, dining and kitchen areas yielding sunshine and views to the Greenbelt. The units that are linear along the north/south axis have the living, dining and kitchen areas oriented perpendicular to the length of the building. This allows these living zones to have both morning and afternoon sunshine.

Photographs: Manfred Volkenandt / Nassauische Heimstätte

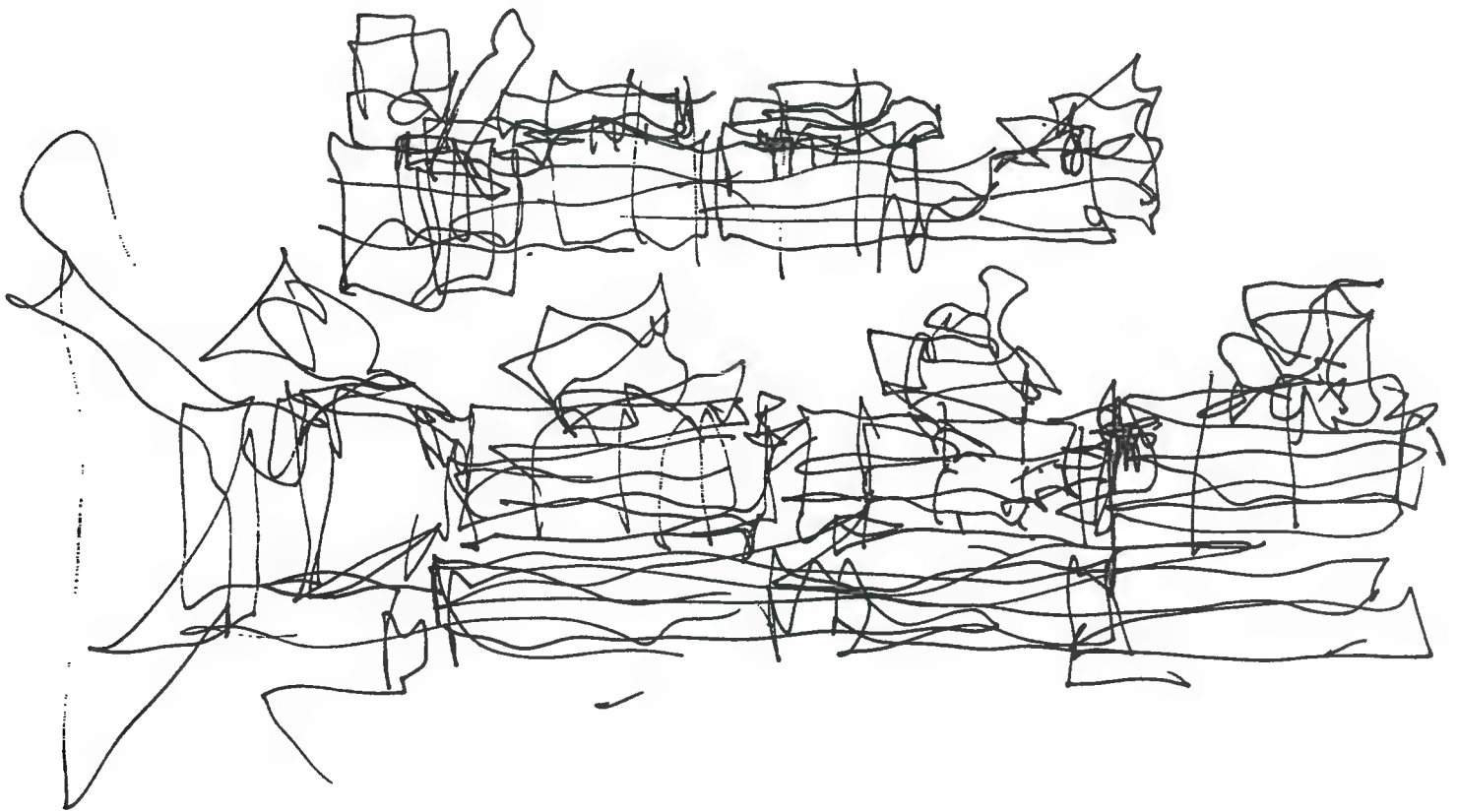




Site plan



The programme includes the creation of a large semi-public park. The solution adopted by the architect locates the park as an integral part of the natural circulation routes used by the new community. The dwelling blocks have been located so that they emphasise these routes.

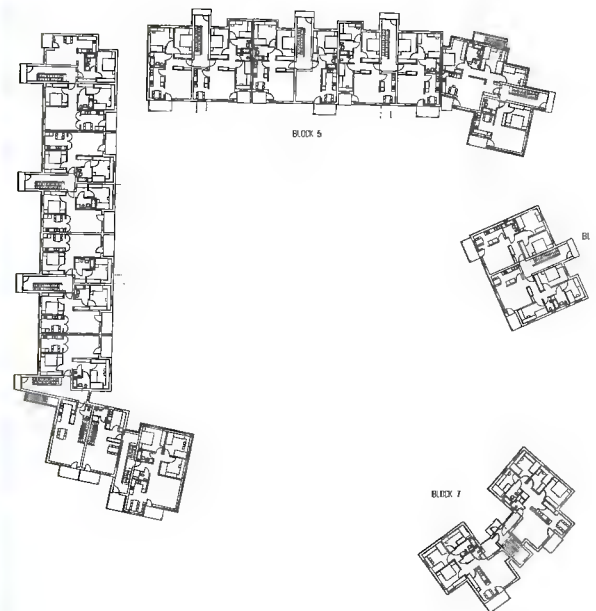




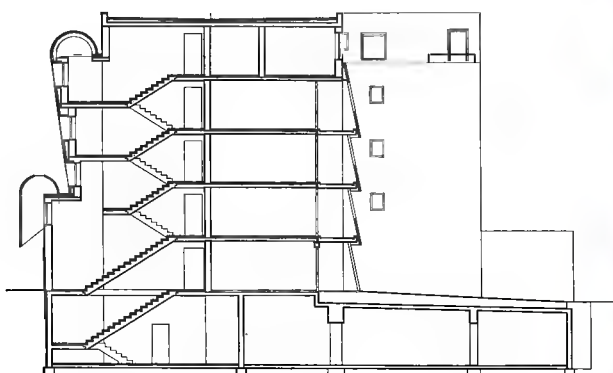
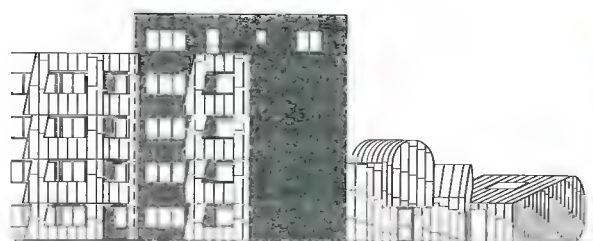
The building aesthetic is derived through the building forms that emphasise entries, stairs, penthouses and balconies.

These forms are emphasised with zinc panels while boldly coloured plaster facades comprise the major surface material.





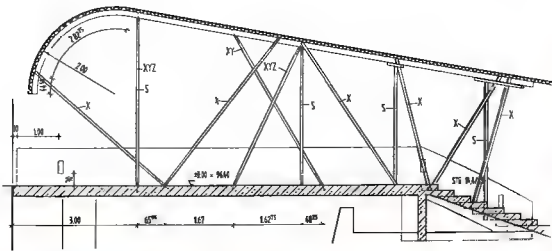
The colour, texture and rotundity of shapes and volumes of the areas done in sheets of zinc contrasts with the level planes and formal simplicity of the rest of the surfaces comprising the various facades of this residential complex.



Cross-section



With views of the park, the rows of dwellings have been built with the traditional construction method of rendered masonry walls, painted in colours ranging from white to earth to ochre.



Detail of the access catwalk



Mecanoo architecten b. v. *Nieuw Terbregge*

Rotterdam, The Netherlands

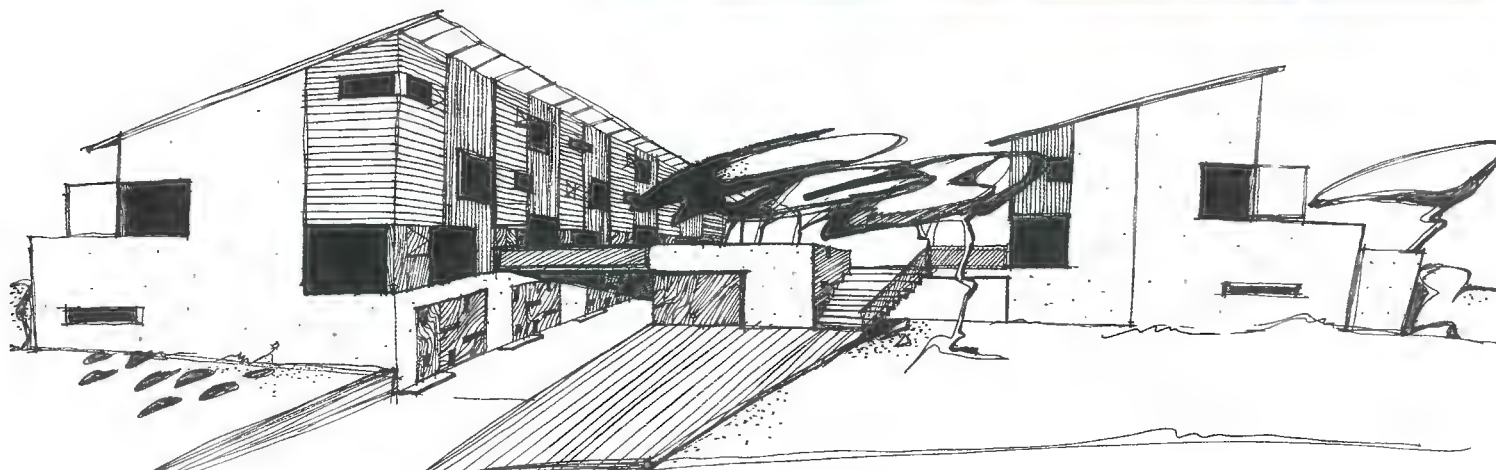
Nieuw Terbregge is in an inner city zone in Rotterdam called Vinex, situated on a typically Dutch site where the water level is higher than the land.

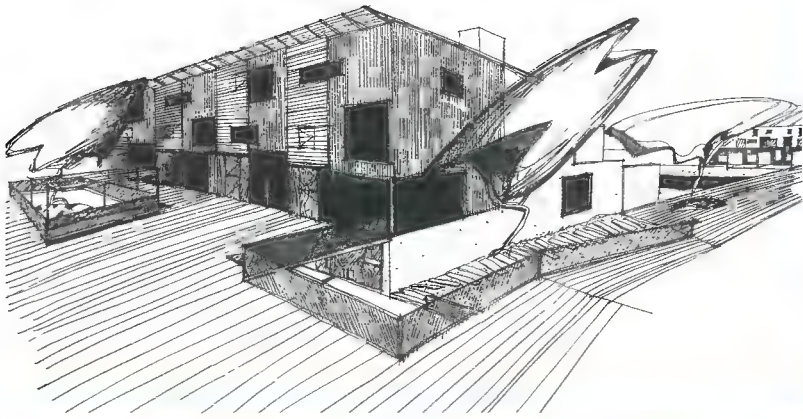
The project is comprised of 107 dwellings located on four islands, called the Landjes. Next to this area, 48 waterfront houses have been designed in an eight-under-one-roof style.

The design ambition was to create a holiday atmosphere around the house. The double-deckers have a wooden terrace, which flows into the floor of the living and kitchen area as a continuous surface. The car park below the decks uses a stone flooring surface. The two worlds are connected to each other through trees that grow through holes in the terrace and staircases. The gaps between the wooden planks of the platform, built in the traditional scaffolding manner, let filtered light through to the interior. The islands are connected via a bridge. These homes are a protest against the tidiness of neighborhoods in Vinex, which lack all sense of adventure. Here is a neighborhood where you can run and roll between the double-deckers, play hide and seek, jog along horizontal and vertical routes, or hold a barbecue in the street as if you are on holiday at home.

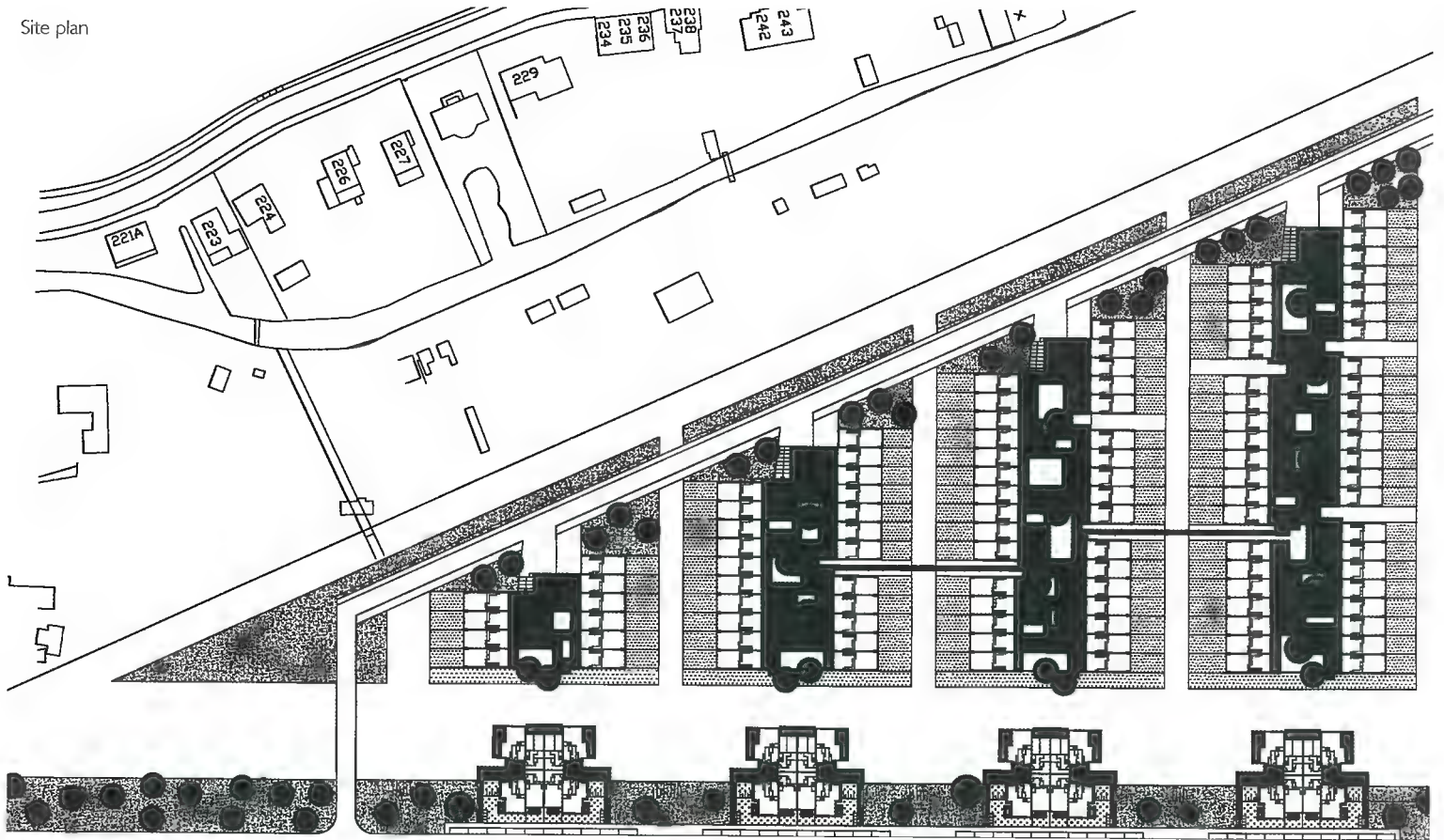
The rhythm of the slightly irregular blocks in combination with the dancing roofs ensures a coherent composition for each island. The staccato of the alternation - per half house - between dark brown, unpolished wood and uncompromising white plaster, brings about a visual interruption and refinement of the dimensions of the typical Dutch row-house.

Photographs: Christian Richters





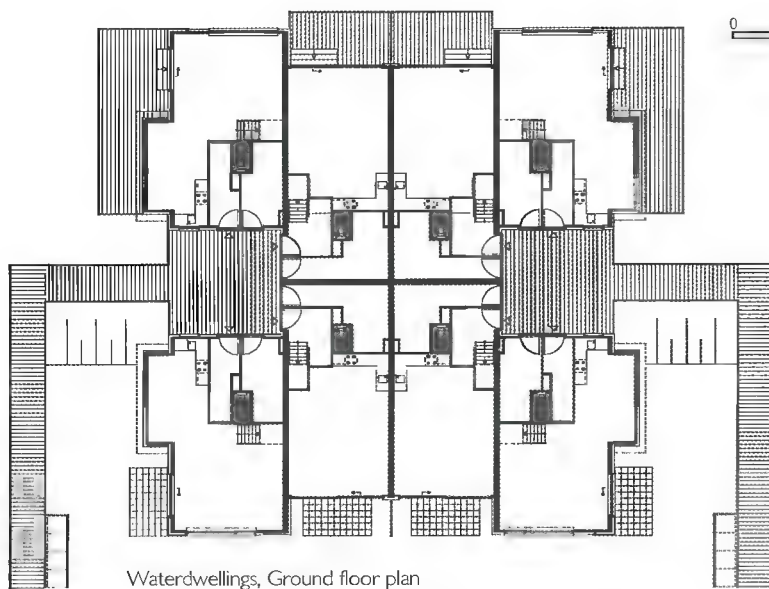
Site plan



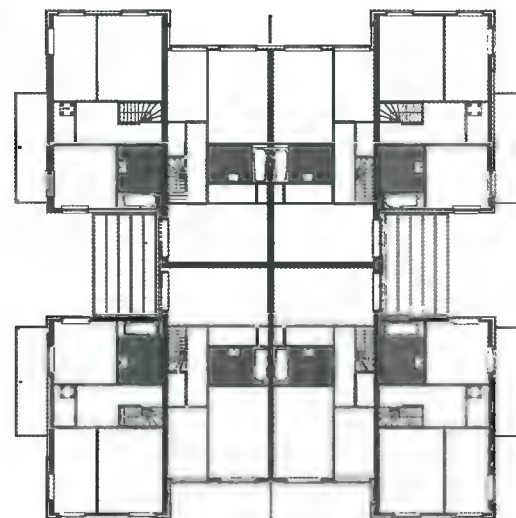
The double-decker building is highly organized: everything is arranged centrally as in a large block of flats: a mini boiler room, a container room for waste, the lighting of the trees on the terrace and the placement of the cables and piping.



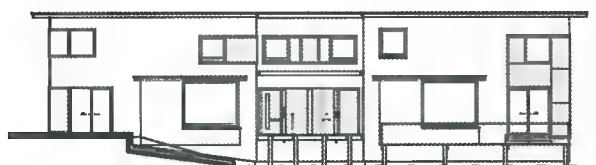




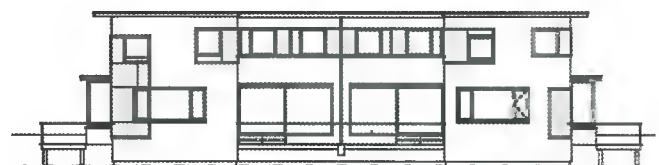
Waterdwellings, Ground floor plan



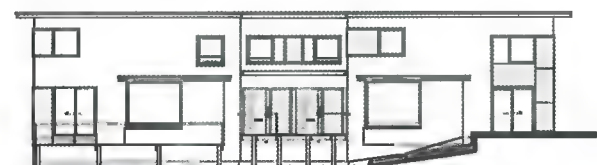
Waterdwellings, First floor plan



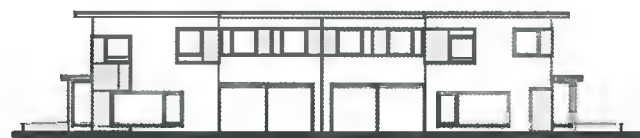
East elevation



North elevation



West elevation

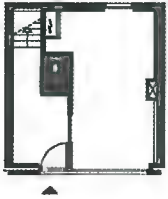


South elevation



Deckdwellings

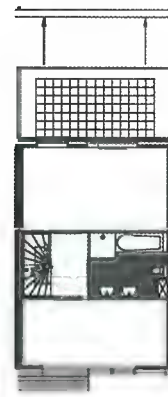
0 2 5 10 m



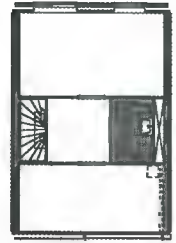
Basement floor plan



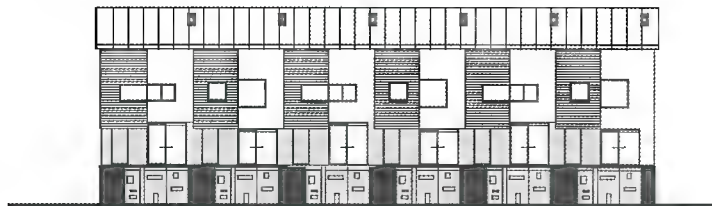
Ground floor plan



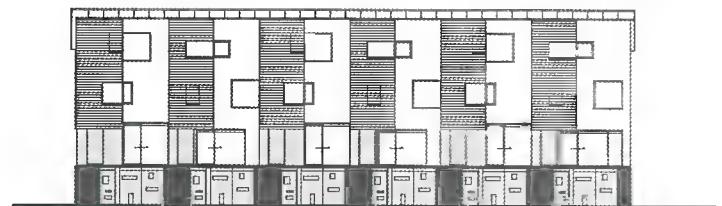
First floor plan



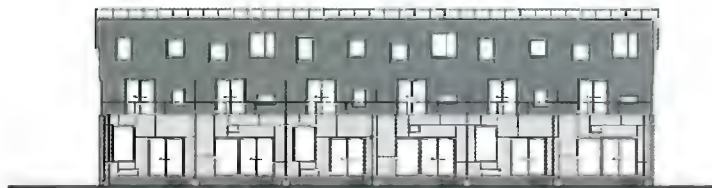
Second floor plan



Front facade



Front facade

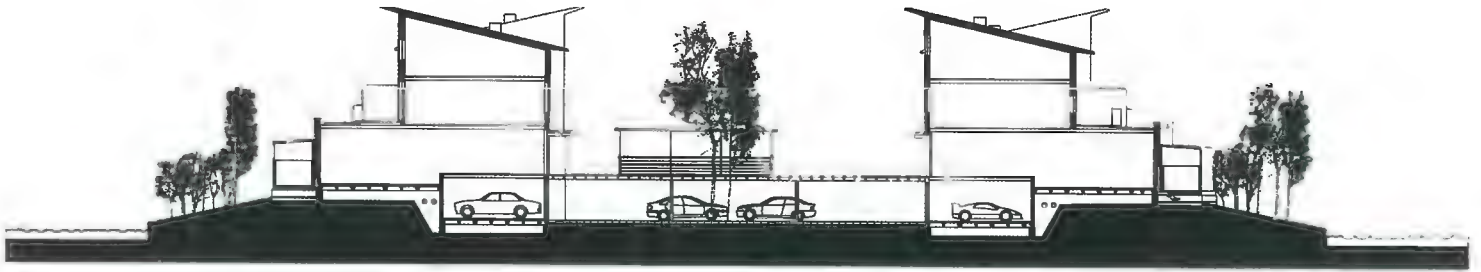


Back facade



Back facade





Sections







A bridge connects the various islands. The gaps between the wooden planks of the platform, built in the traditional scaffolding manner, let filtered light through to the interior.





m.a.a.s.t. architects
*Maison pour Personnes
Agées Dépendantes*

Tremblay-En-France, France

Architectonically and urbanistically speaking, two factors made this project a delicate operation. On the one hand was the requirement to build a residence for dependent elderly persons which would be open toward the neighborhood and compatible with the surrounding apartment buildings. And on the other was the need to create a building which would dignify the neighborhood and the city.

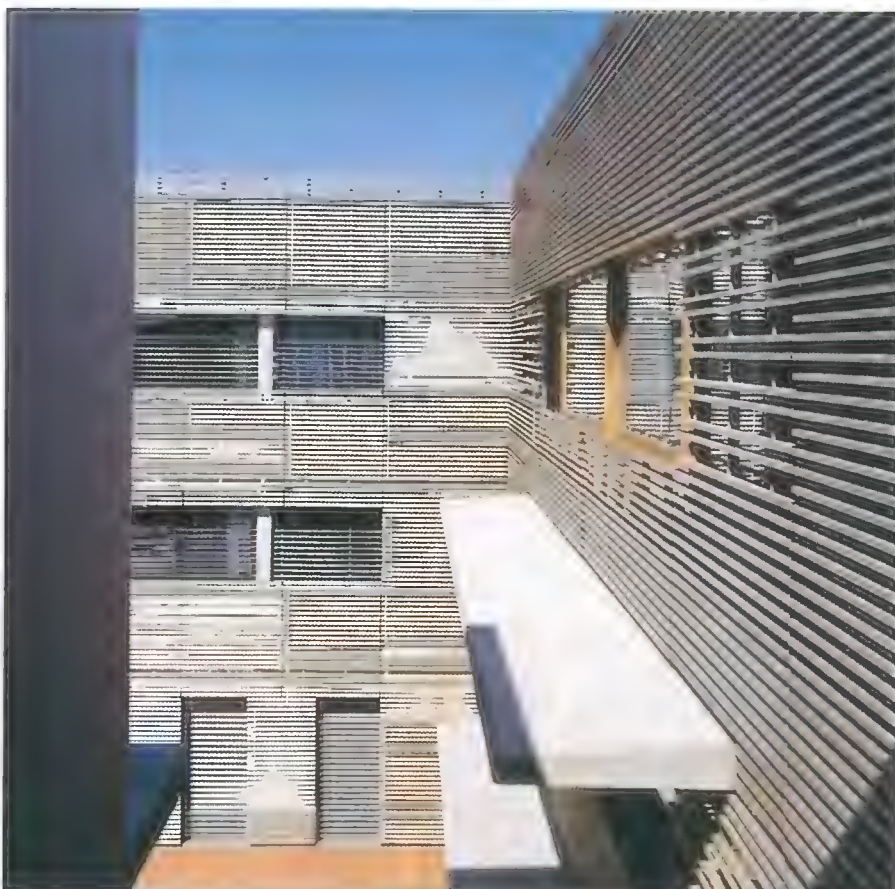
The plot of land was remarkable for its location in the heart of the Vert-Galant quarter, which is close to a train station, medical clinic, post office and other services. The project's capacity for knitting various elements together lies as much in its proposal of a mixed, intermediate and conciliatory contrivance to scale, as in its location in the middle of the neighborhood.

The horizontal dimension (that of the strip containing the multi-purpose room, the small dwellings module with its overhanging roof, and the building framed by the structure of the neighborhood) finds its vertical counterpart in the volume where activities and services are located. The latter serves as a point of reference and recuperates these constructions. Likewise, the length of the garden is scaled to the size of the surrounding pavilions.

The proposed architectural scheme was based on an economy of means and carried out using simple combined elements and a voluntary restraint in avoiding any overly emphatic gesture - all effects except scale. The residence is composed of two generating elements. The first is the multi-purpose room: a lengthened space with direct views of the garden, which serves at once as vestibule, reception or meeting hall and restaurant. The second, organized on three levels above the inner walkway, is the residence proper, which has space for 73 beds, services and diverse activities. Facing the gardens and collective spaces, with an outer skin of strips of wood, it has a welcoming, light-filled lobby. The glazing on the top floor heightens the effect of natural light in the inner walkway.

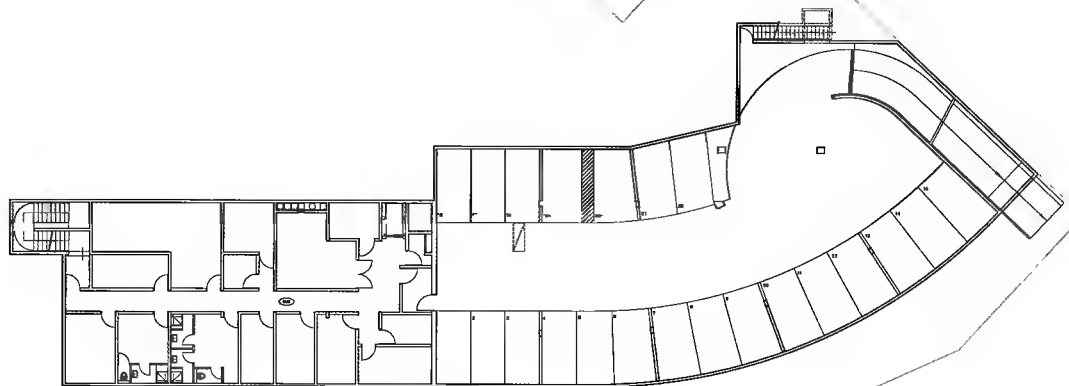
Facilitating orientation, and nullifying any colorist effects, the 73 bedrooms are asymmetrically distributed along the inner walkway. Most of the rooms face the Avenida Antonie Cusino, creating a partially glazed facade of wooden sandwich panels, which is lengthened via a series of connected balconies overlooking the private garden located at ground level.

Photographs: Hervé Abbadié, Jean-Marie Monthiers

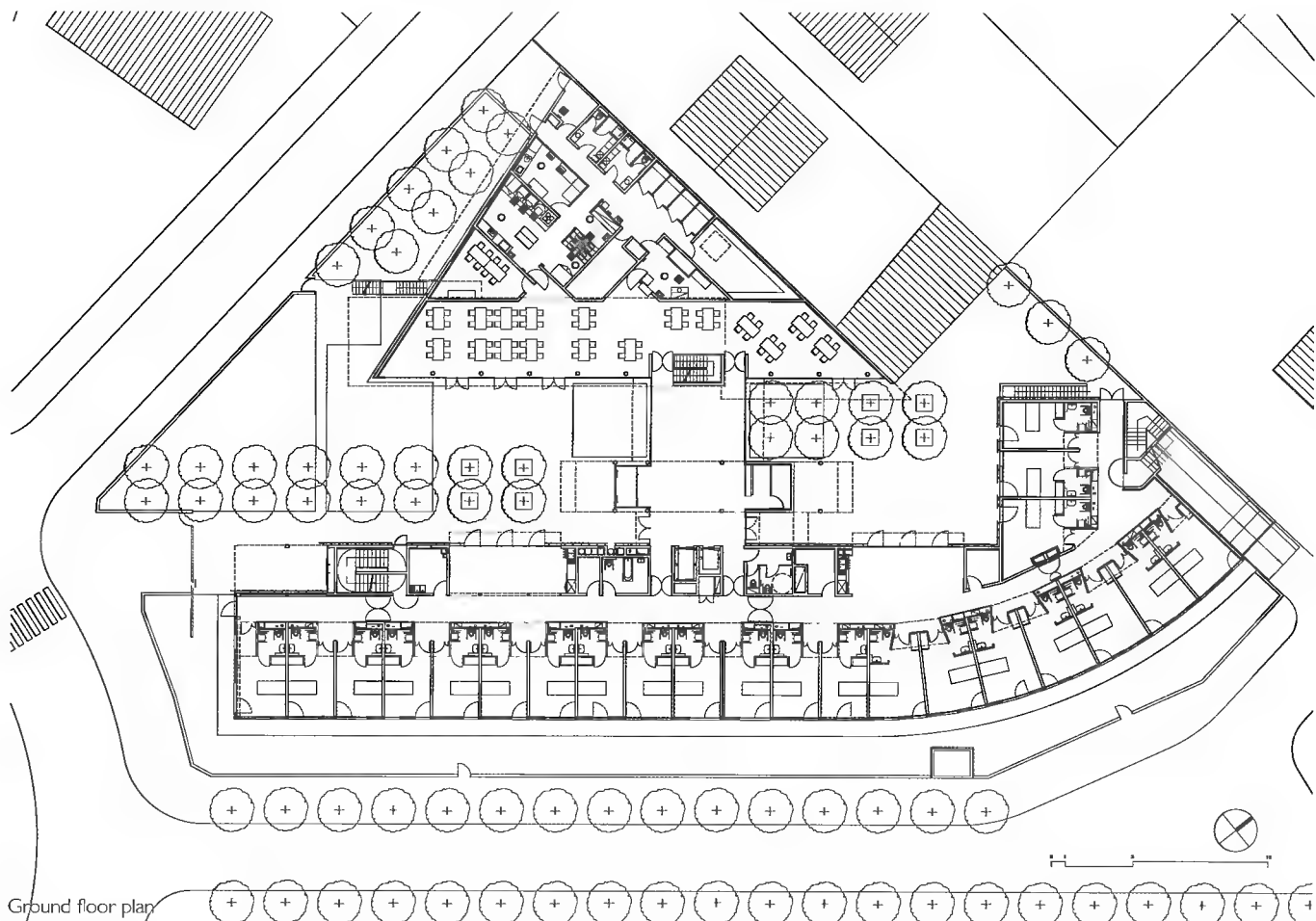




Basement floor plan

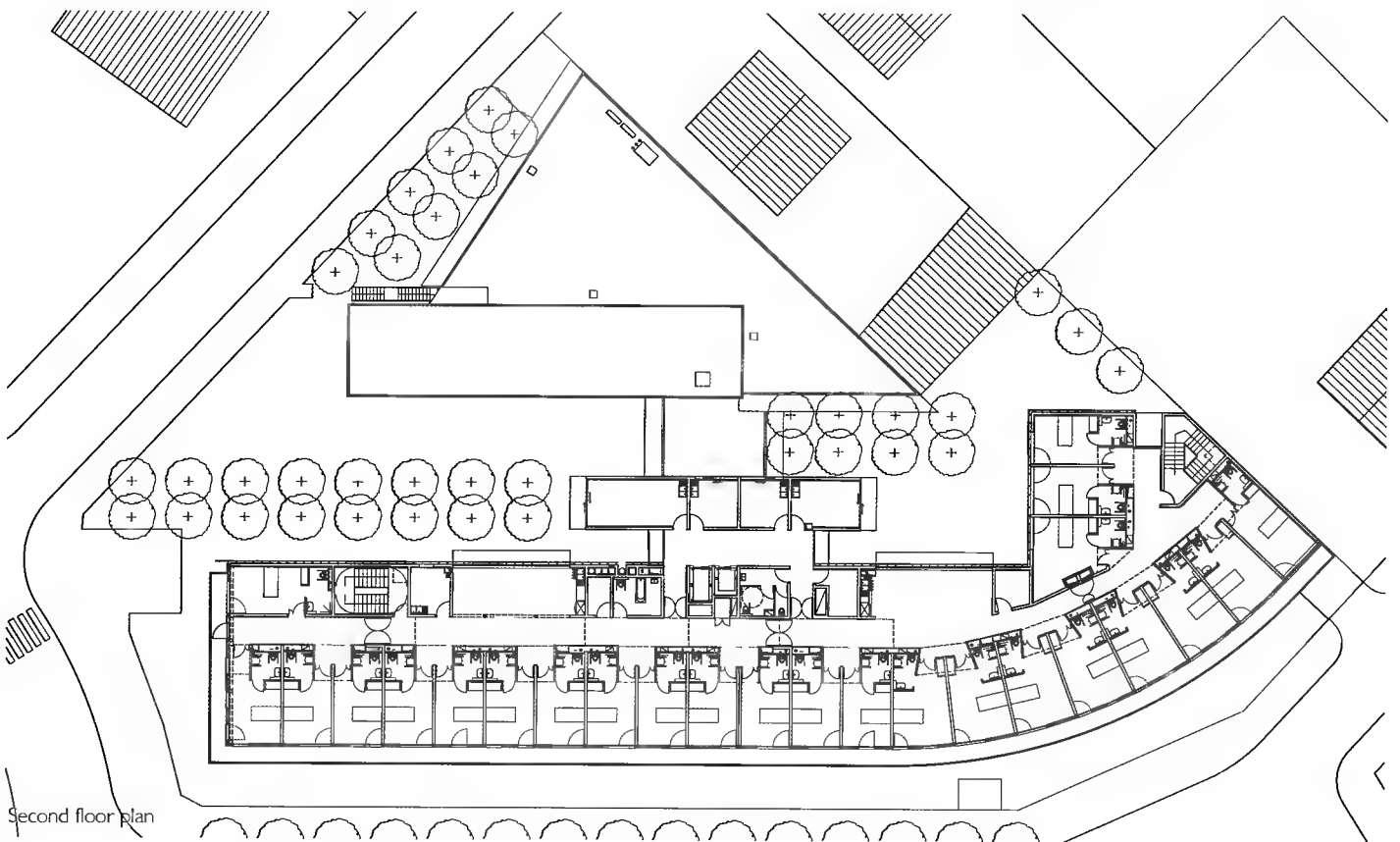
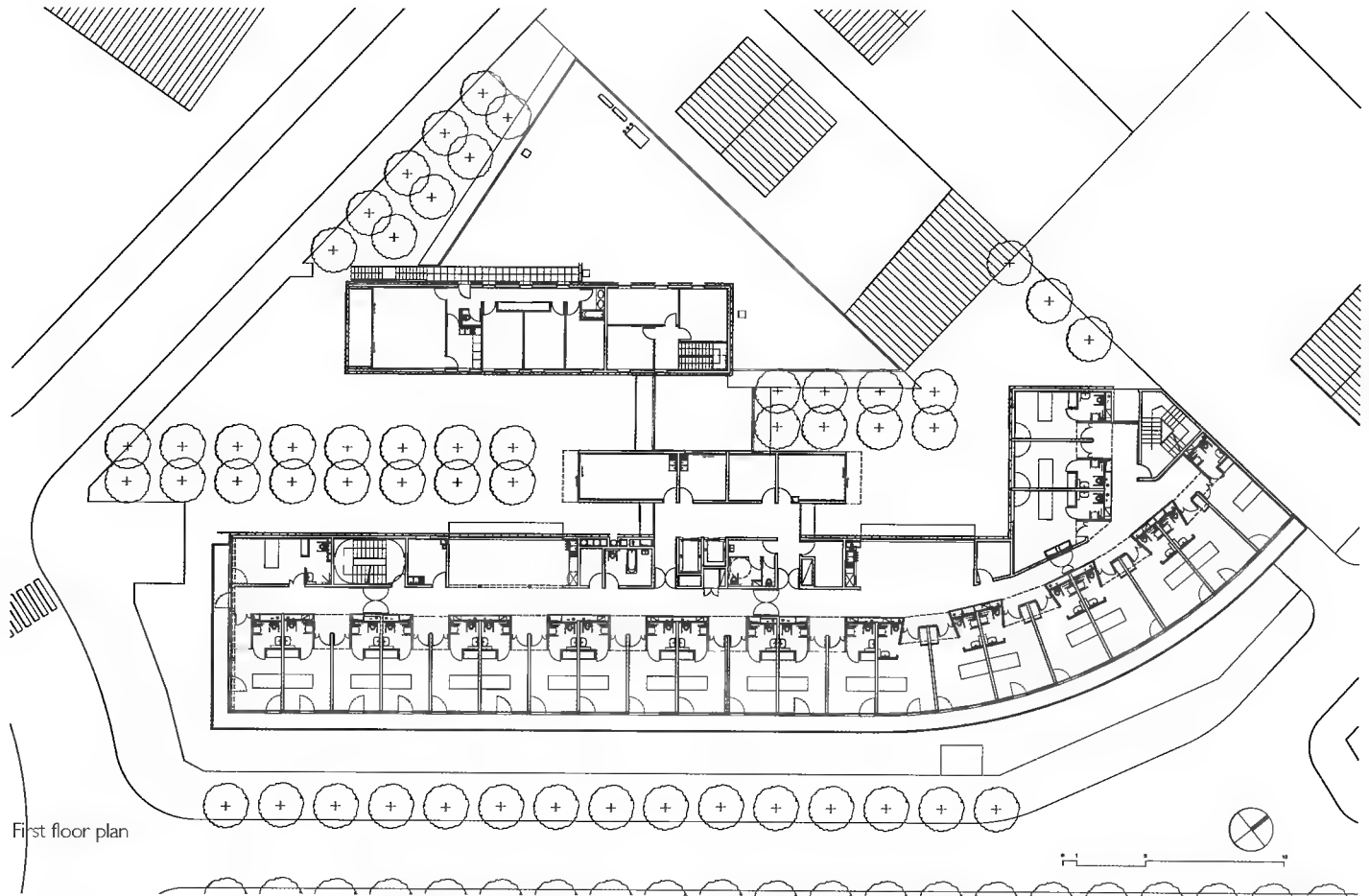


Ground floor plan

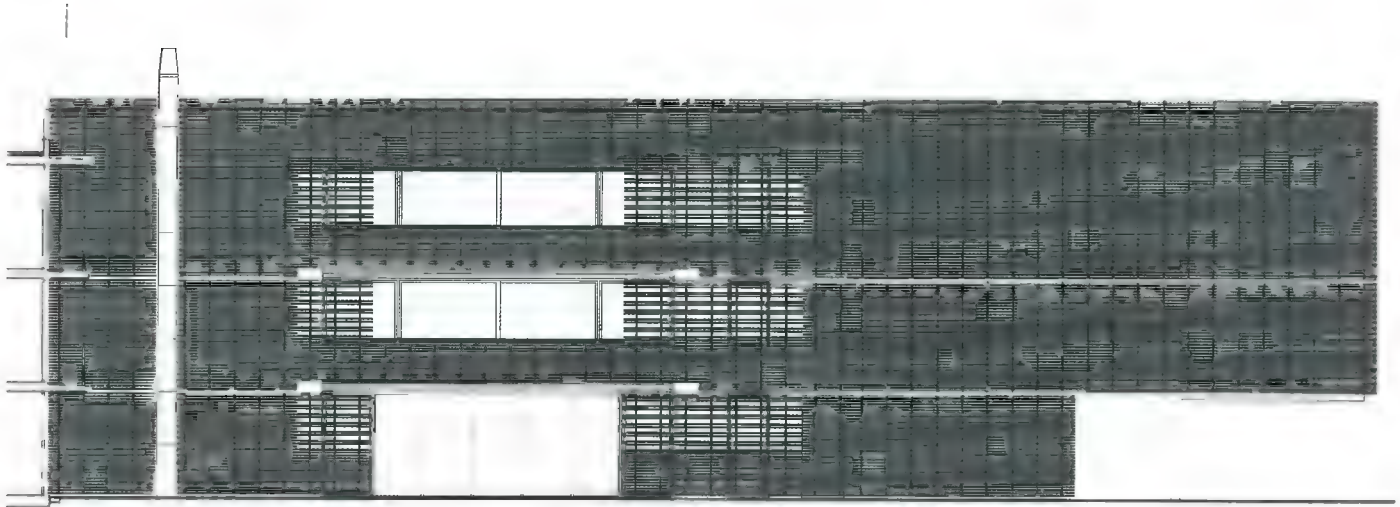


In adhering to deadlines and respecting costs, part of the building is prefabricated. Thus, for example, the horizontal wooden sandwich panels along the façade were put together in a workshop and built using dry construction.

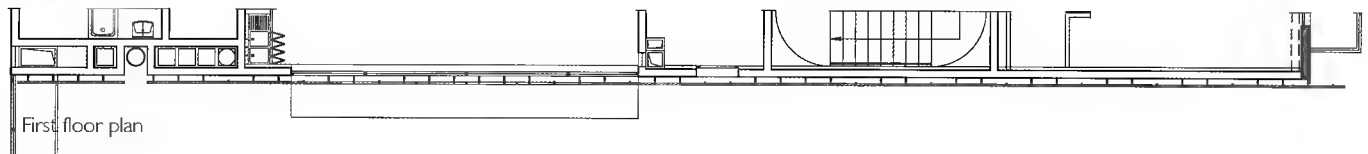
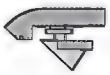




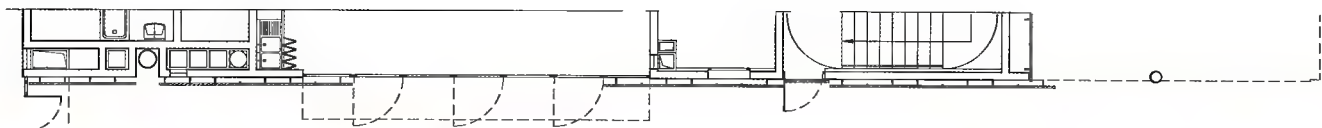




Elevation

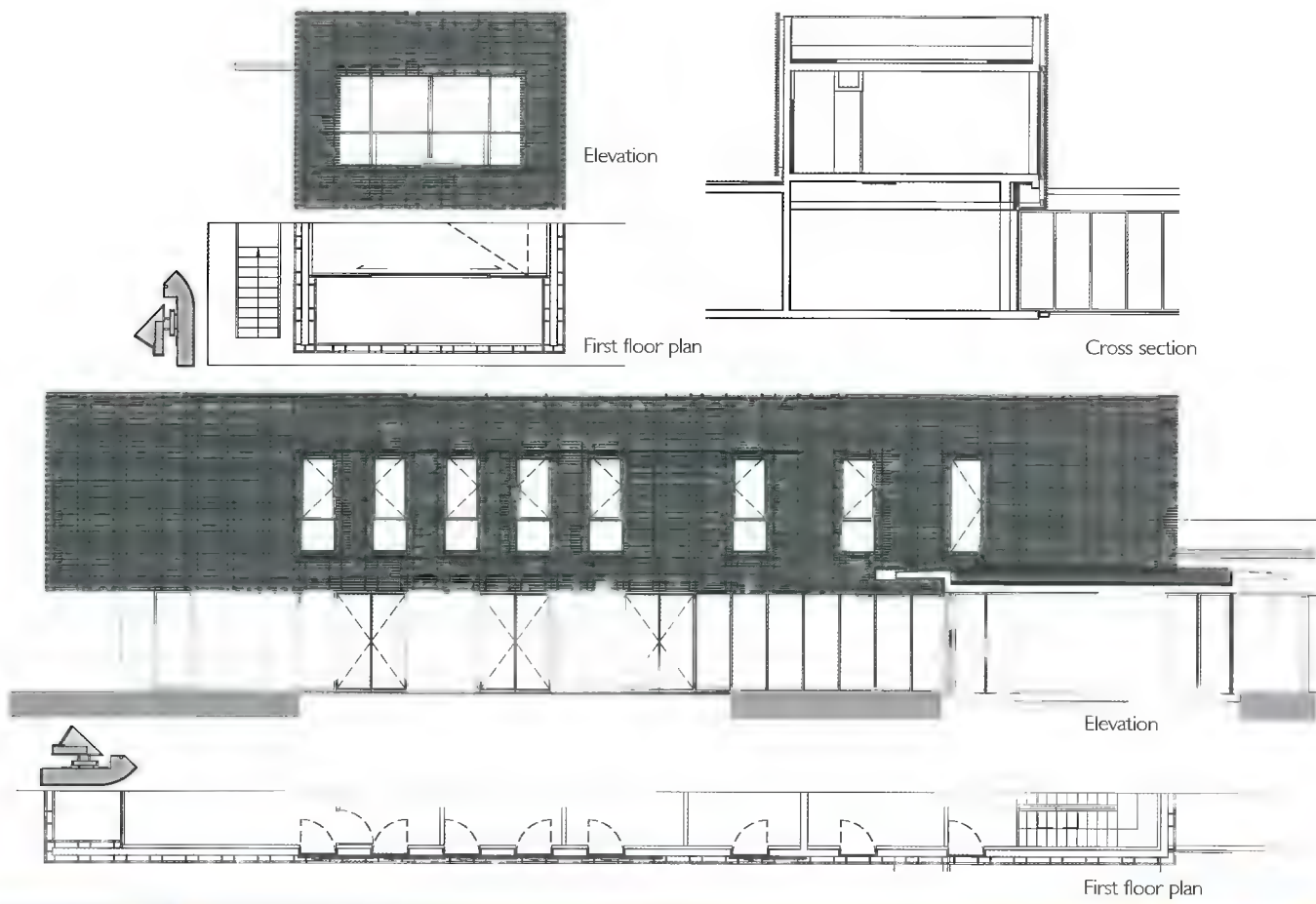


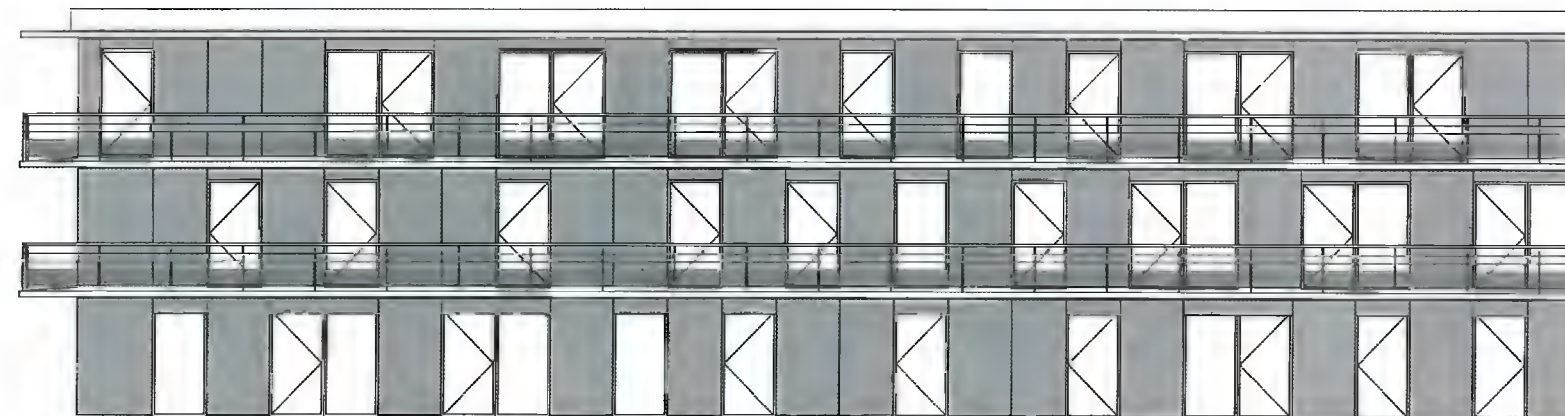
First floor plan



Ground floor plan

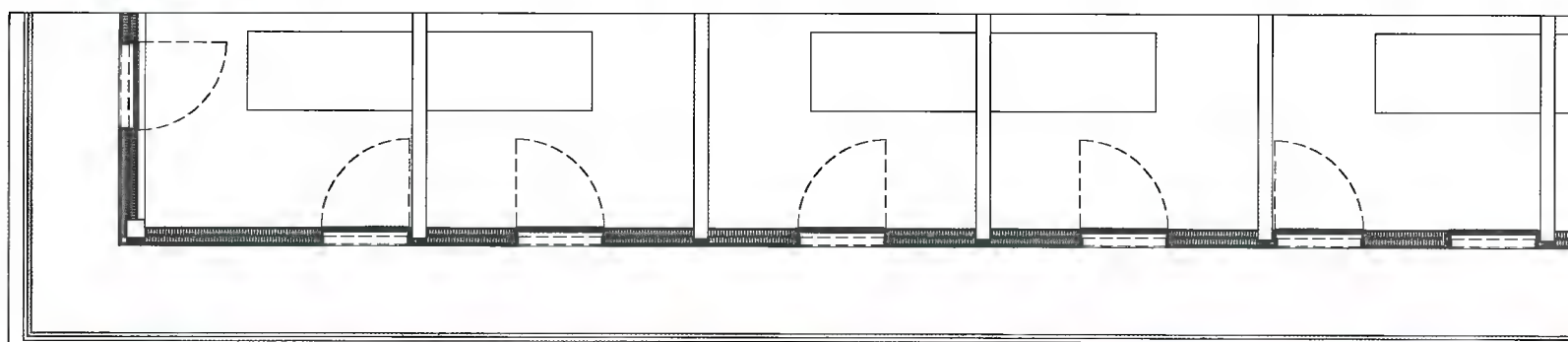






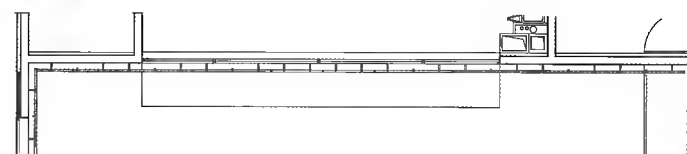
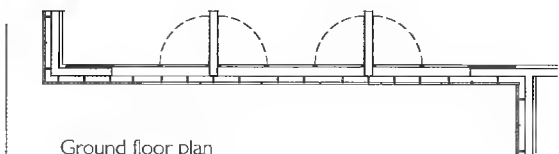
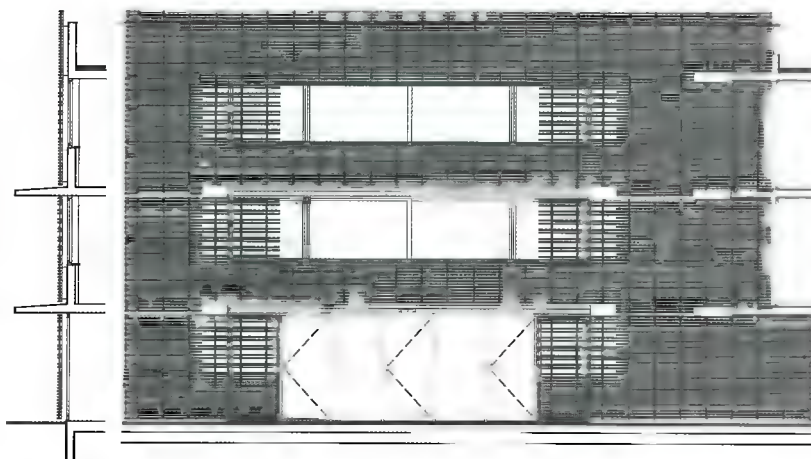
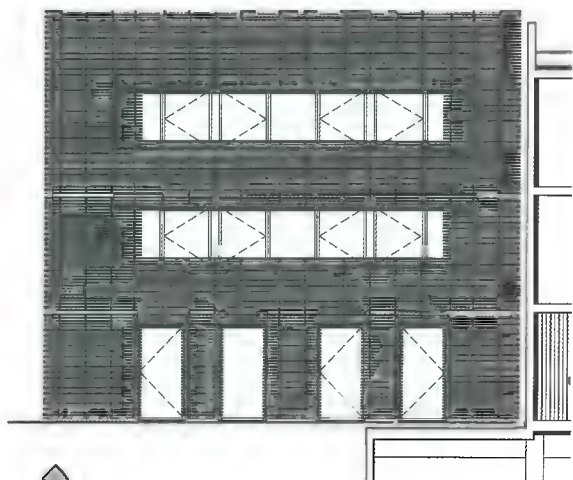
Elevation

0 1 2 5

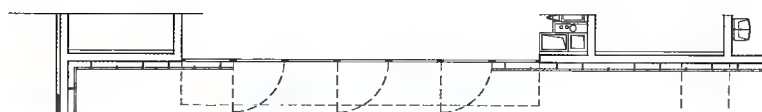
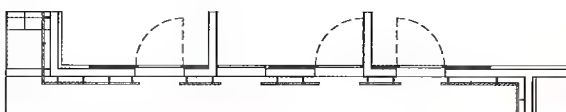


First and second floor plan

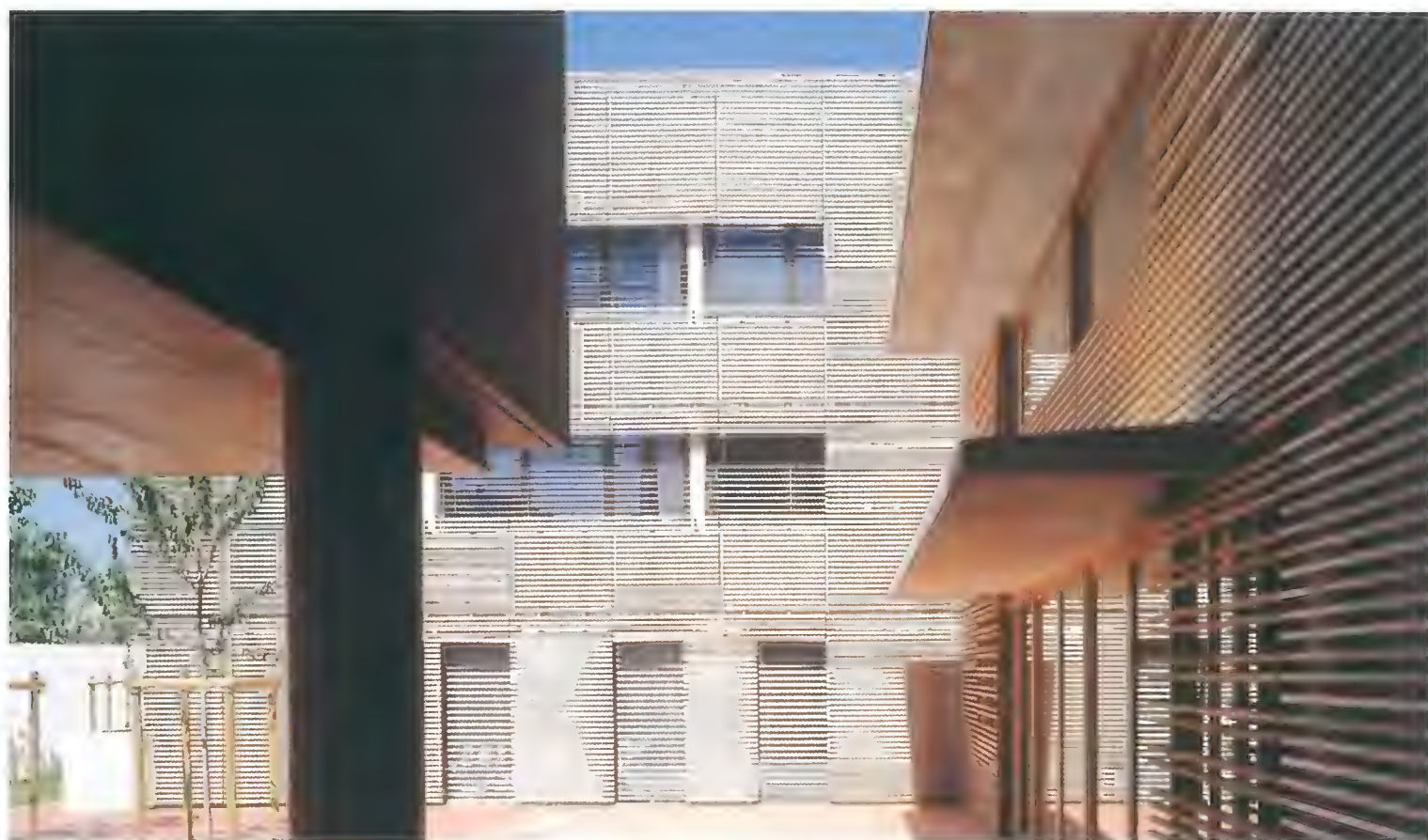




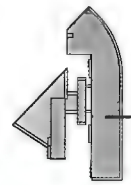
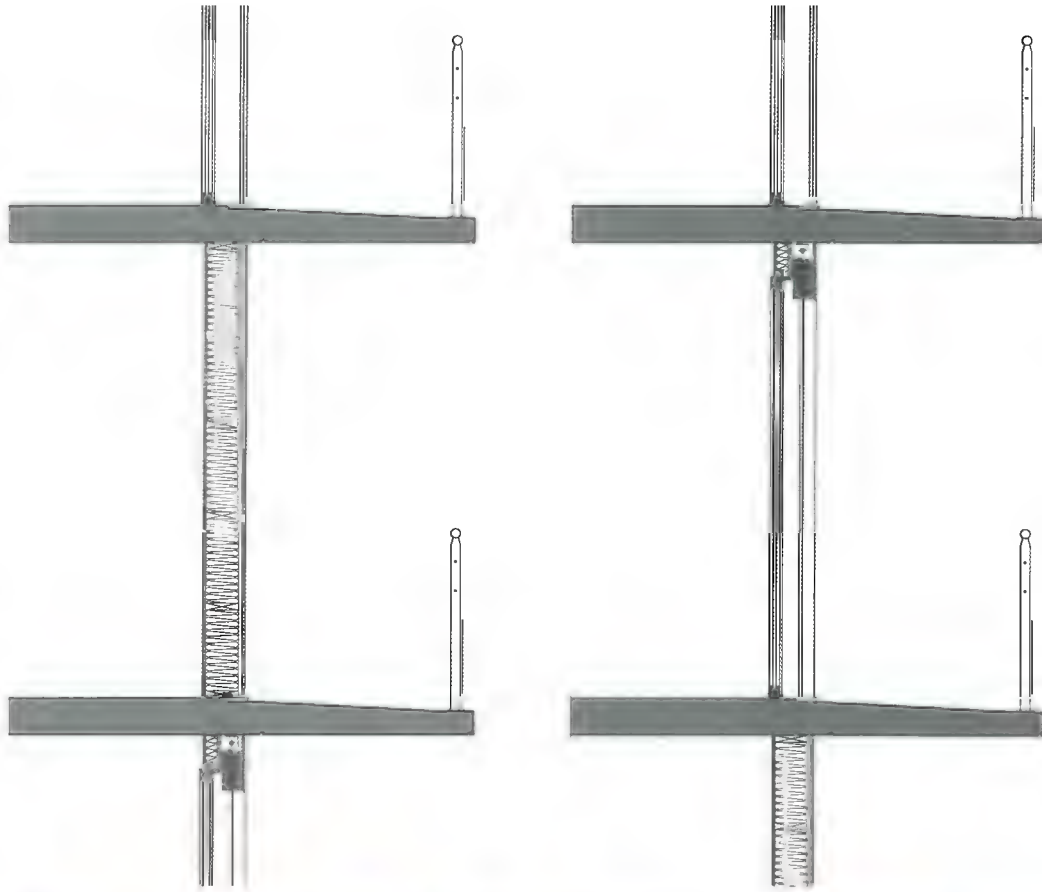
Ground floor plan



First floor plan

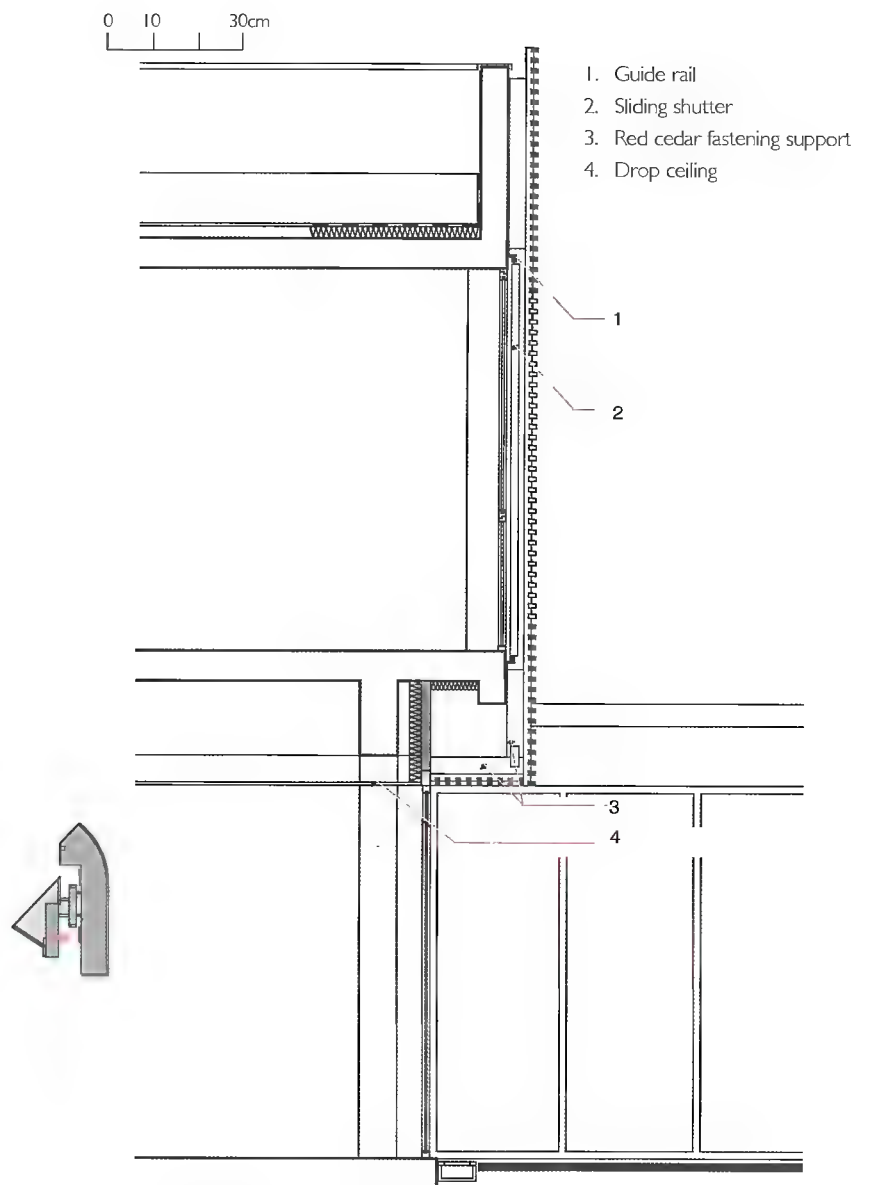
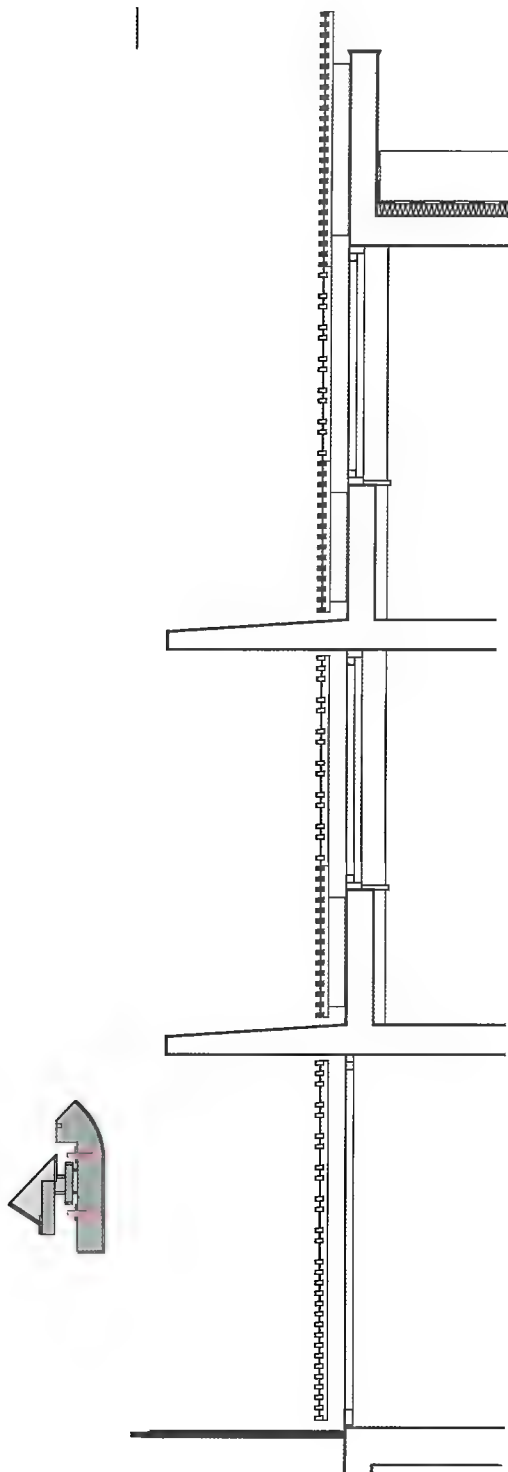


Construction details



The placement of the residence overlooking Albert Thomas Square creates a long garden, which is open to the square, turning it into another element of the complex. A volume inserted above the inner walkway, in the garden, houses most of the services.

Construction detail



W.J. Neutelings

Two housing projects in Borneo Sporenburg and "de Hollainhof"

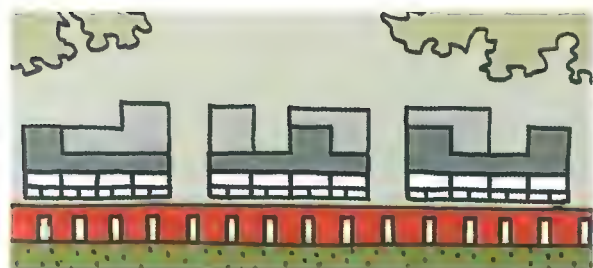
Amsterdam, The Netherlands
Ghent, Belgium

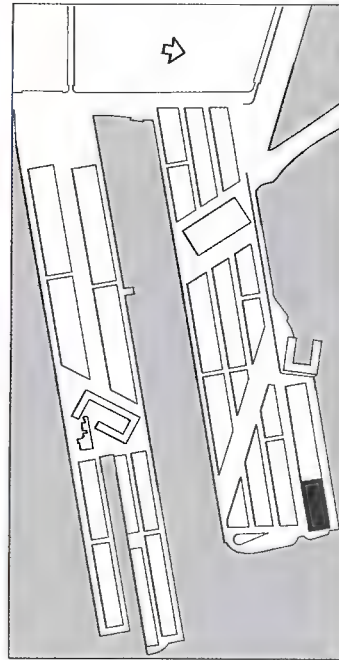
The apartments in Borneo Sporenburg, Amsterdam, form part of a master plan for the development of the old jetties to the east of Amsterdam, an area characterised by long and narrow strips of land. The abandonment of port activity in this area has led to a gradual transformation of the district into a residential area. The project provides for 27 dwellings based on three different types of apartment, each with its own entrance from the street and a private garden.

The distribution of the apartments facilitates the use of natural lighting, views and intimacy. The language formula chosen by the architects represents a deliberate allusion to the traditional architecture of the jetties that formerly occupied the site. All the facades are clad in hard industrial brick, combined on the ground floor with the metal of the handrails and grates and with cedar wood in the structure of roofs and terraces.

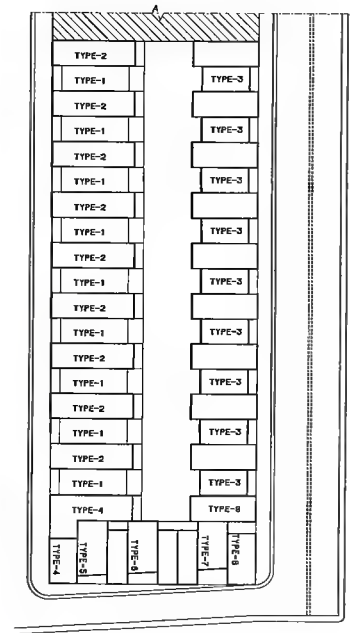
The project "De Hollainhof", in Ghent, consists of a social housing complex containing 120 apartments and an underground car park with a capacity for 90 cars. The aim of the scheme was to create an attractive habitat that combined the concepts of urbanity and density with those of tranquillity and privacy. The result is a complex that merges elements of both large and small scale. The apartments are developed inside two large longitudinal volumes, one that skirts the street and one that runs along the river bank. These strips are composed of fifteen blocks, each one containing between eight and ten apartments. The area between the two volumes forms a large green area. From the city, the complex is reached through a long tunnel leading to the courtyard, from which the dwellings are accessed: each one has its own garden with an entrance from the common courtyard. Numerous recesses in the ground plan create a varied programme of room typologies within a set of cedar-clad geometries with a clear identity.

Photographs: Rob 'T Hart, Sara Blee



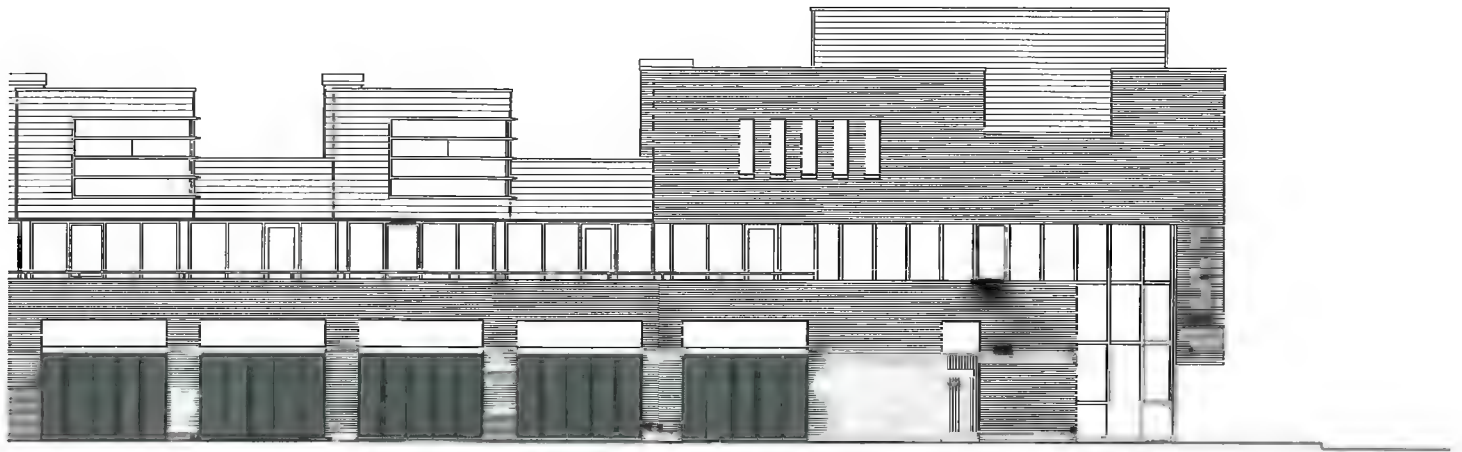


Site plan



Housing typologies





South elevation



East elevation

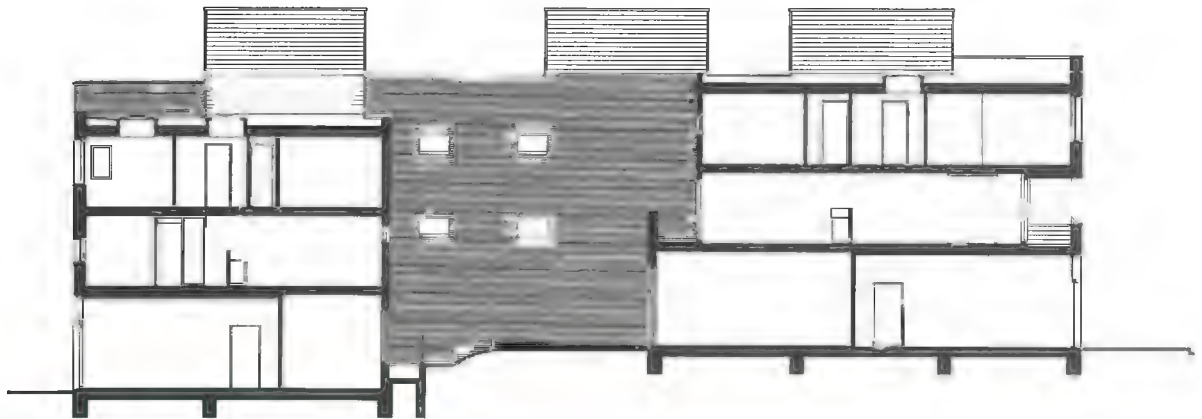


North elevation

These dwellings were conceived as a spatial puzzle that is developed in both height and depth. Thus, each one enjoys light and views, its own entrance from the street, a garden and roof terraces. The lower part, clad in industrial ceramic tiles, is developed as a series of walls that are alternately open and closed. The upper part was clad with wooden slats of bevelled red cedar.



Cross sections





- 1. Entry
- 2. Hall
- 3. Garage
- 4. Carport
- 5. Storage
- 6. Study
- 7. Study
- 8. Garden room

Ground floor plan



- 9. Hall
- 10. Living room
- 11. Kitchen
- 12. Bedroom
- 13. Bathroom
- 14. Winter garden
- 15. Terrace
- 16. Storage

First floor plan

- 17. Hall
- 18. Living room
- 19. Kitchen
- 20. Bedroom
- 21. Bathroom
- 22. Storage
- 23. Void
- 24. Terrace



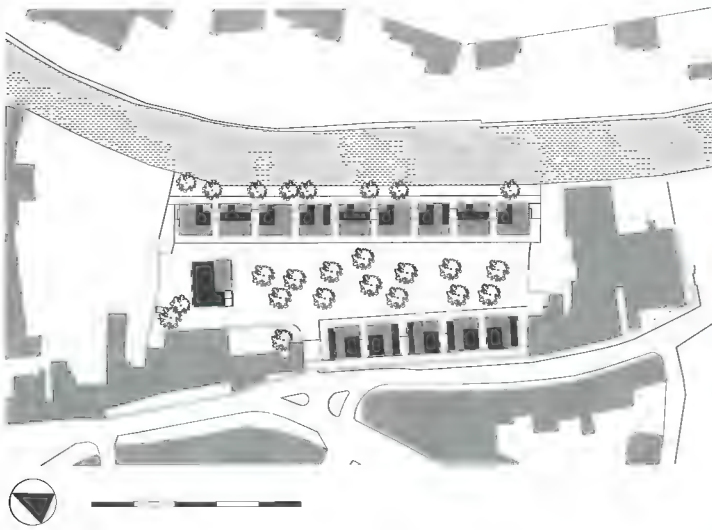
Second floor plan

- 25. Hall
- 26. Balcony
- 27. Void
- 28. Terrace



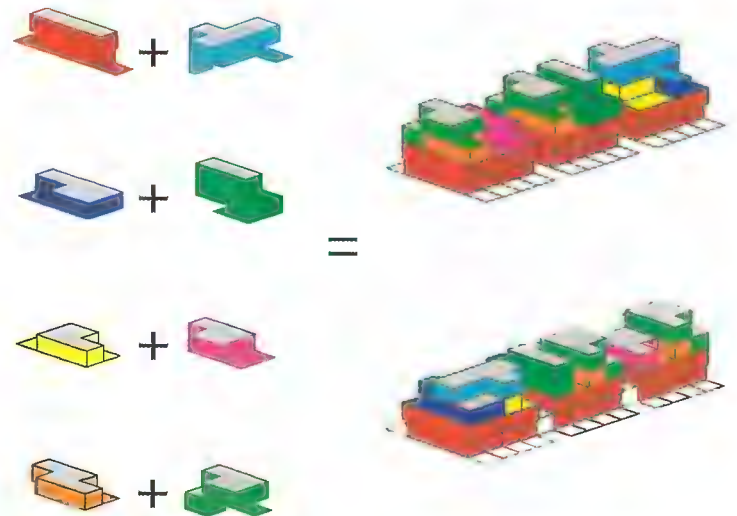
Upper level floor plan

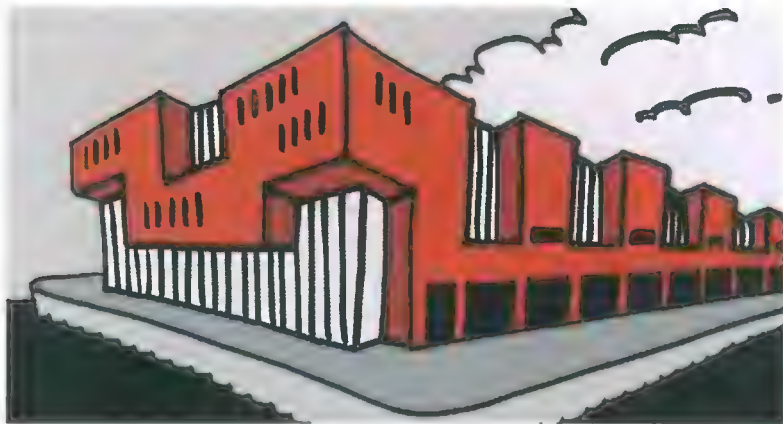
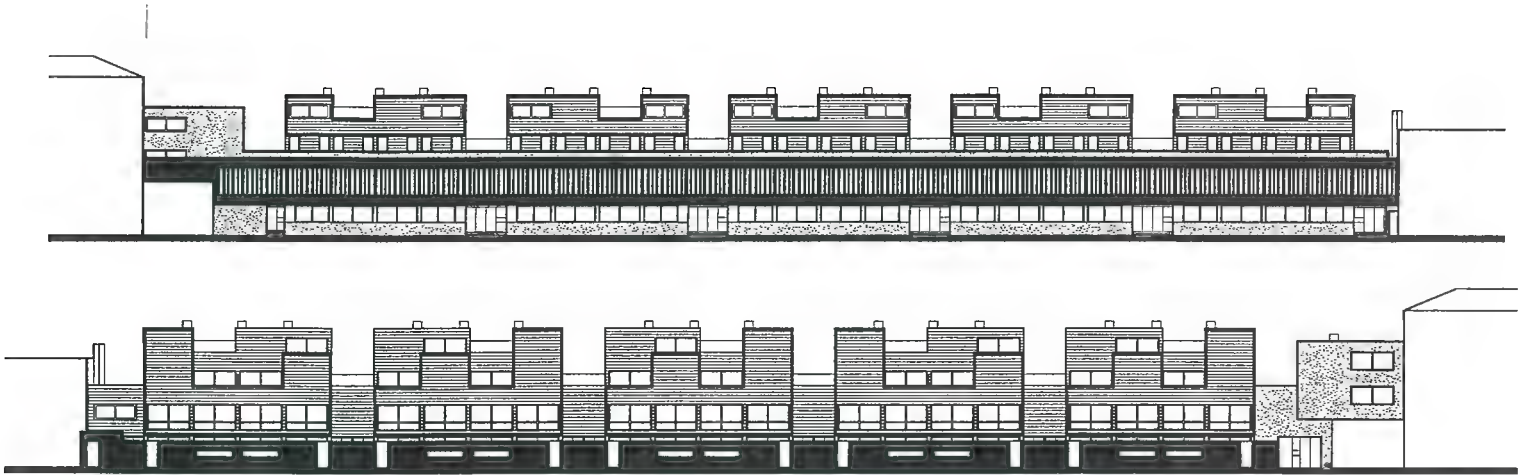
Sporenburg and "de Hollainhof"



Site plan

The residential project has generated an extensive typological variety of dwellings which are laid out in a series of sculptural blocks with a clear identity.





The cedar wood used in the upper part will gradually turn grey, contrasting with the terracotta colour of the prefabricated concrete walls that close the private courtyards.



Shigeru Ban *Hanegi Forest in Tokyo*

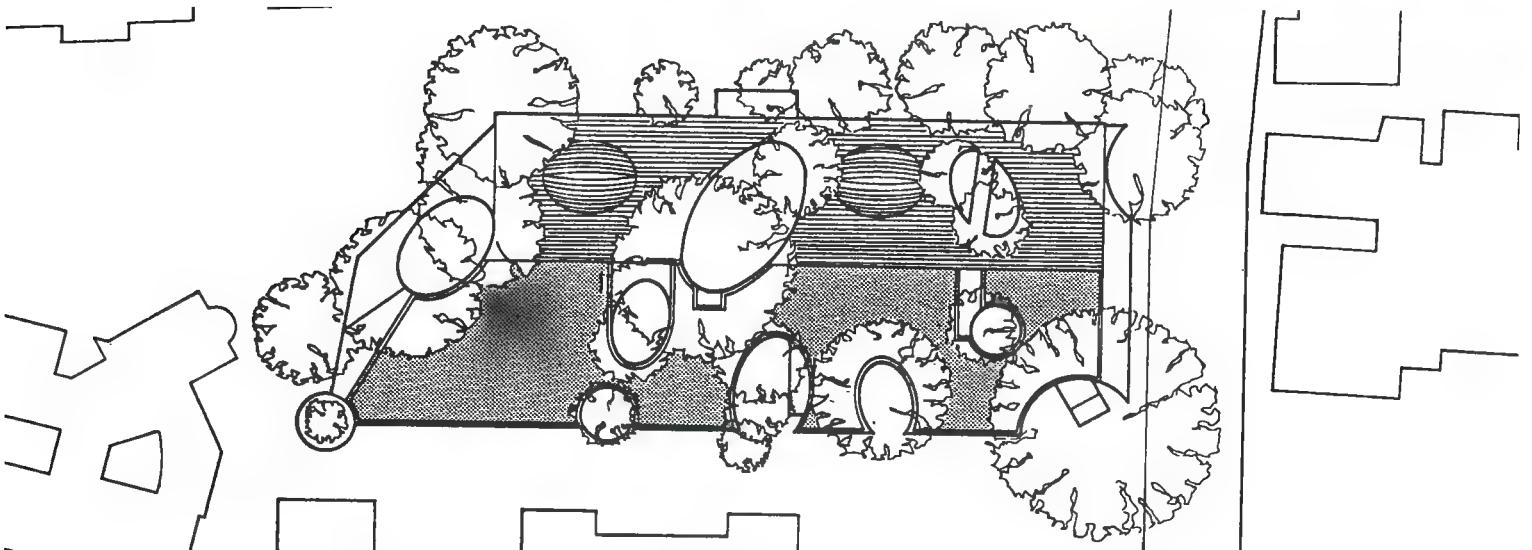
Tokyo, Japan

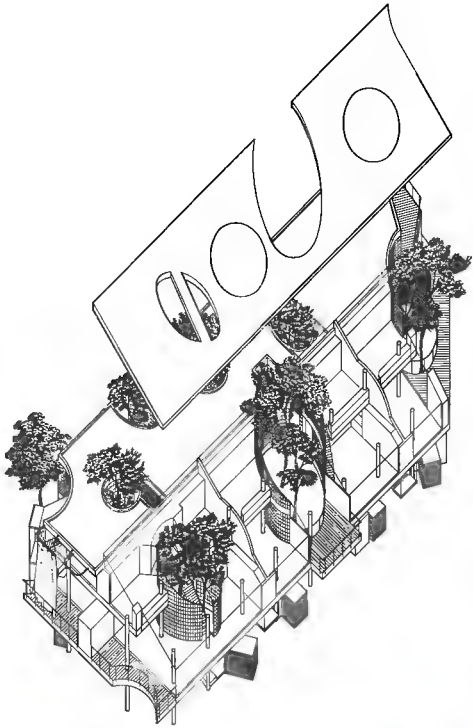
A random group of twenty-seven large trees remained on this land in a quiet residential district in Tokyo. What was required in the programme was to build an apartment house cutting down none of the existing trees, while at the same time staying within a restricted budget. Steel frame construction was adopted to avoid damaging the trees. It was understood that if the column arrangement were to follow the random positions of the trees, the column and beam sizes as well as the joints would have to be diversified and the construction costs would become much higher; for this reason a geometrical grid system which would not interfere with the trees was sought.

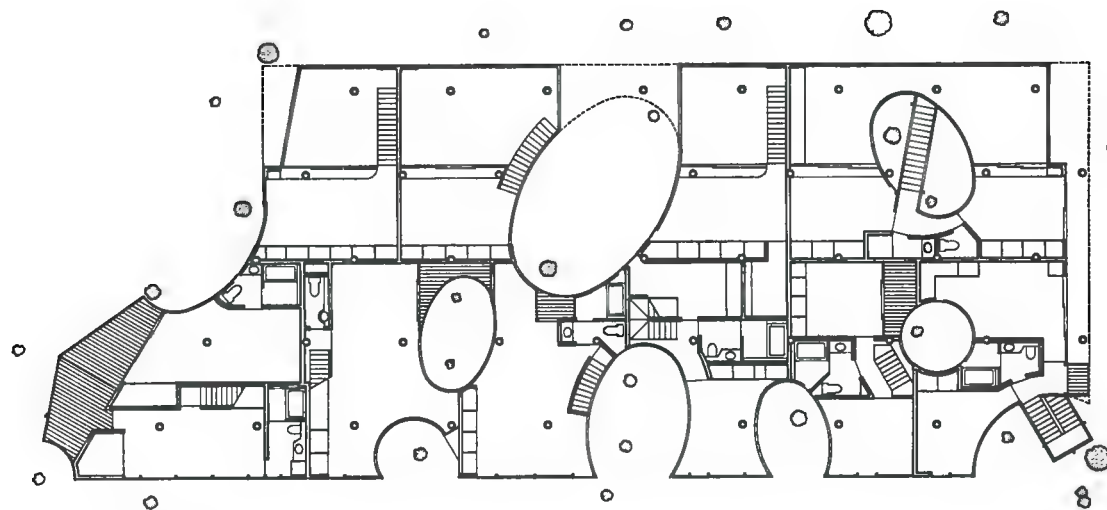
Consequently, a grid of regular triangles (4 metres to a side) was found as a system which can ensure structural stability while providing suitably-sized living areas even with the arbitrary cut-offs of columns, beams and girders. This system also provides horizontal rigidity and a structure which allows free spatial composition with proper cantilevering of the floor slabs, even when the spaces around the trees are hollowed out in circular or oval shapes.

Each of the eleven apartment units is built in a terrace-house style which occupies the floors from the first to the third. This style makes fireproof construction unnecessary between floors and makes it possible to expose the real structural system. In addition, it provides the inhabitants with views of the natural setting on several levels. Full-height furniture units sandwiched between the floor slabs help subdivide the apartment units with compositional clarity and high sound-insulating efficiency. In order to enhance the image of the forest, the first-floor pilotis area is made transparent with only the entrance doors remaining at that level. Mirrored glazing in the private rooms reflects and amplifies the images of the trees.

Photographs: Hiroyuki Hirai



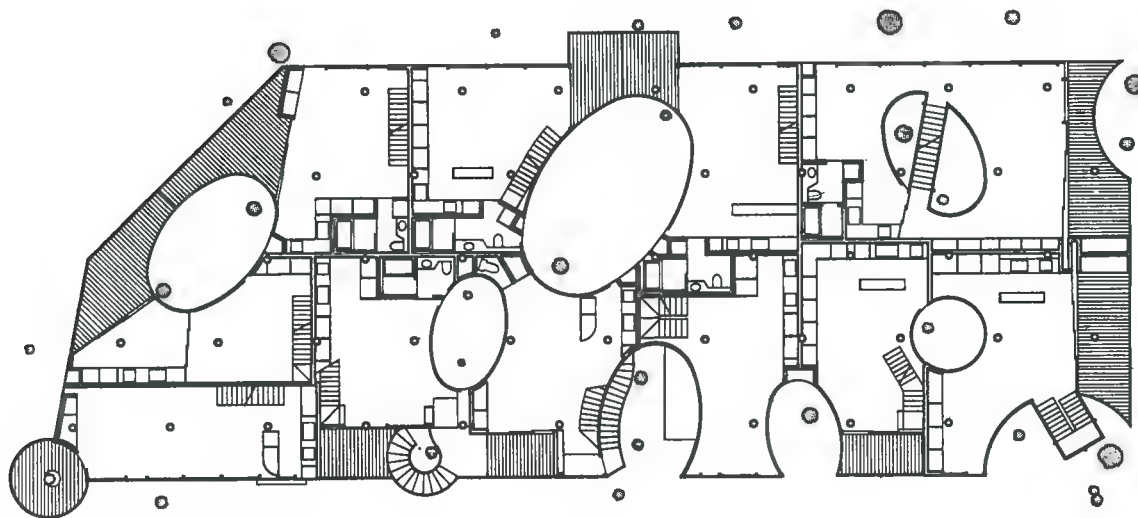




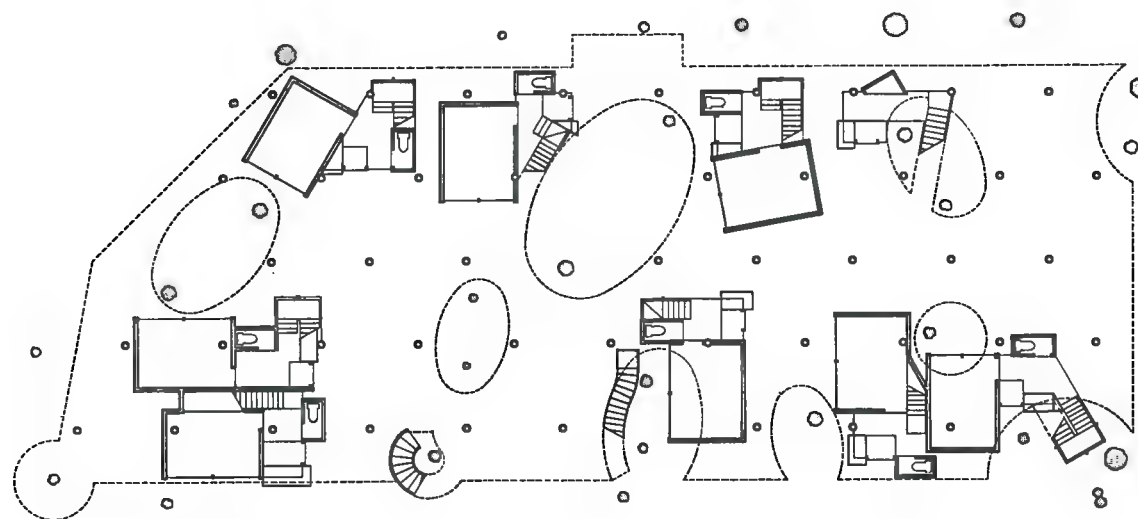
Third floor plan

0 1 2 4

Located in a quiet residential district of Tokyo, the building designed by Shigeru Ban houses eleven apartments distributed on three levels within a volume of unusual geometry. Some of the trees belonging to the wood in which the building is inserted have been left in the oval inner courtyards.



Second floor plan



First floor plan

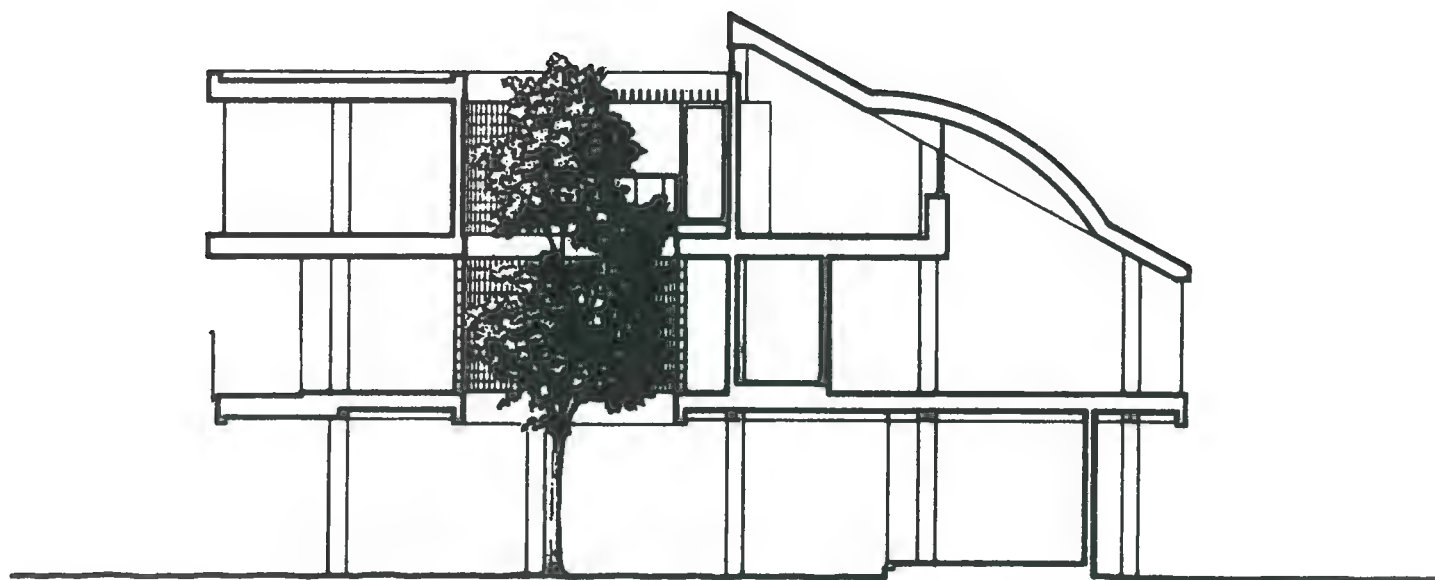




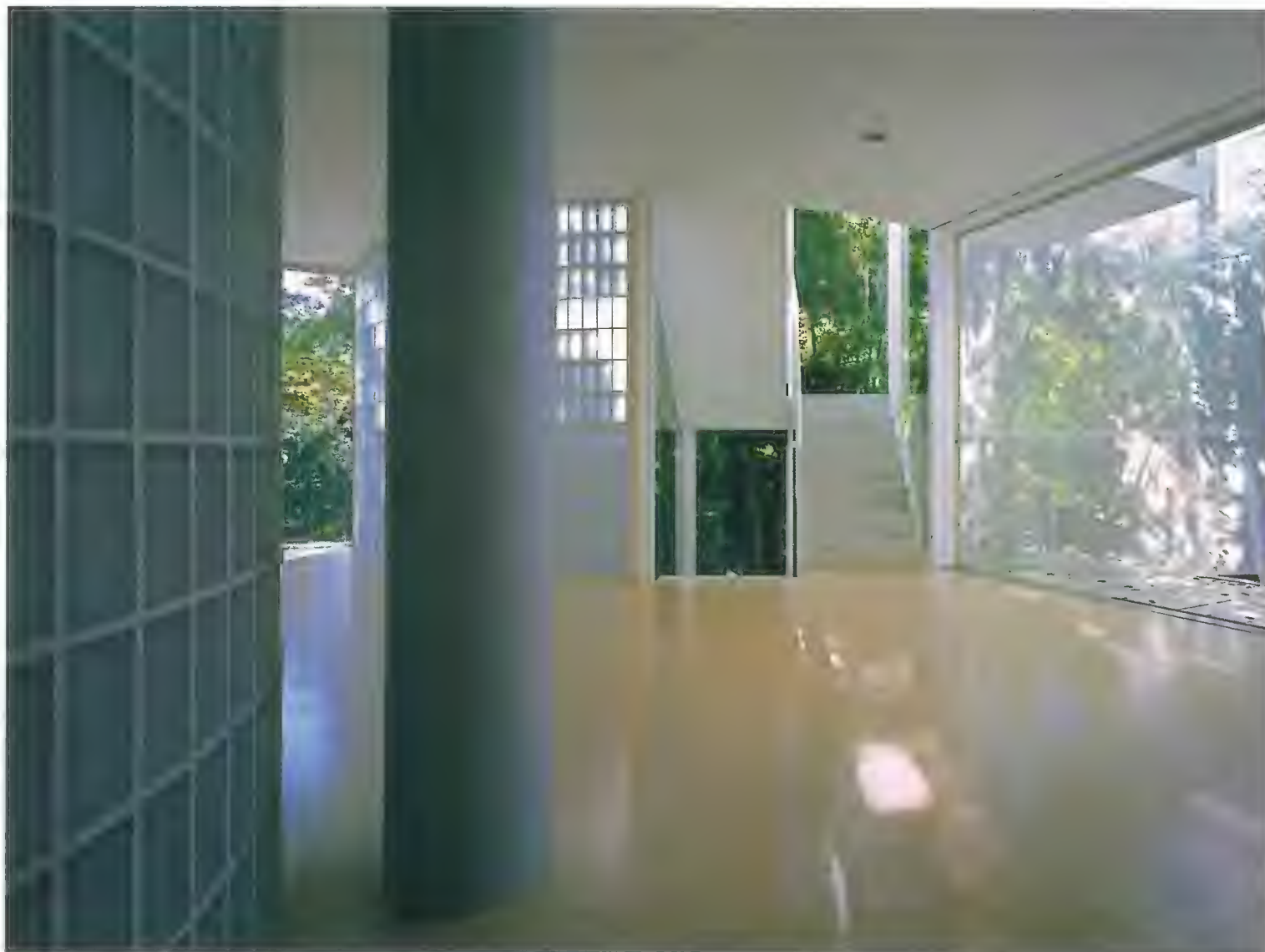


In the interior, the apartments are warm, minimal spaces bathed in the elegance that characterises the work of this Japanese architect. In the large photograph, a view of the living room of one of the dwellings. On the left, a detail of a skylight of a type B apartment.





Cross-section



In the interior of the apartments, the large windows combine the transparent glass panels of the facades facing the exterior with the curved glass brick walls that hide the staircases and access walkways to the exterior terraces and that face the inner courtyard.



Claus en Kaan Architecten,
Amsterdam/Rotterdam
Felix Claus, Anja Lübke,
Ronald Janssen & Furkan Köse
Silverline Tower

Almere, The Netherlands

This apartment block, containing 58 apartments, stands just outside Almere's town center which, two decades after its construction, is undergoing a major transformation orchestrated by Rem Koolhaas' Office for Metropolitan Architecture (OMA). The aim of OMA's spatial master plan is to create a more concentrated, vibrant urban center.

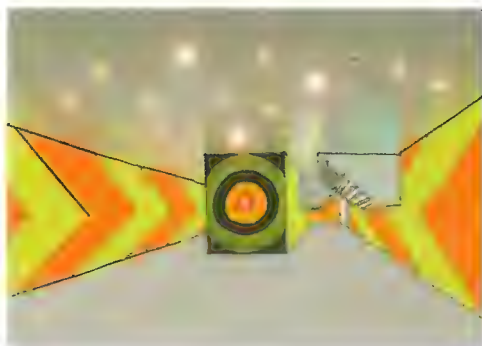
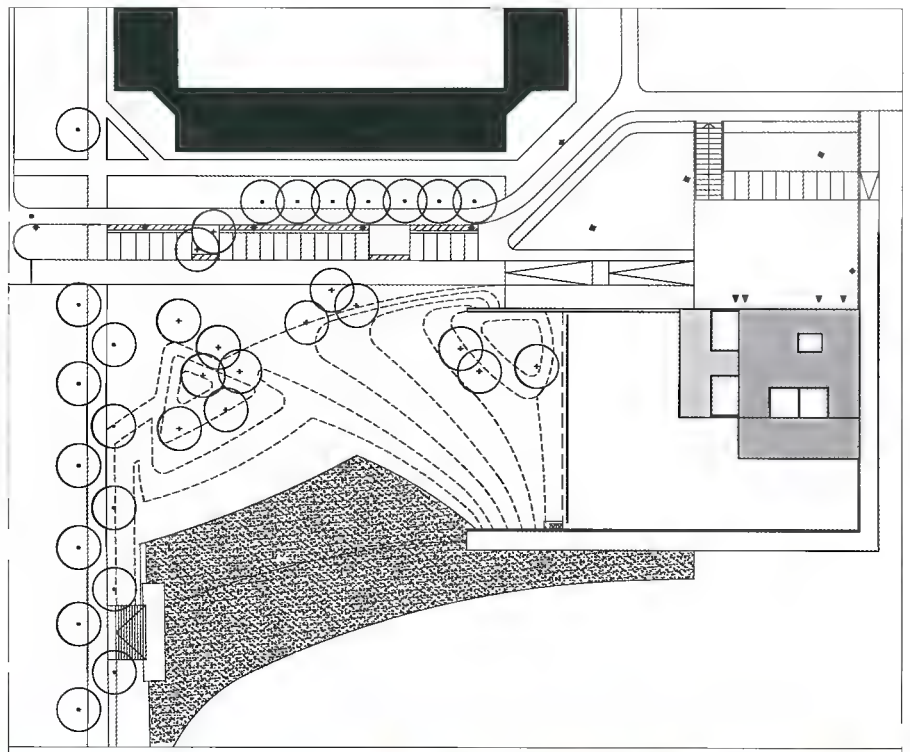
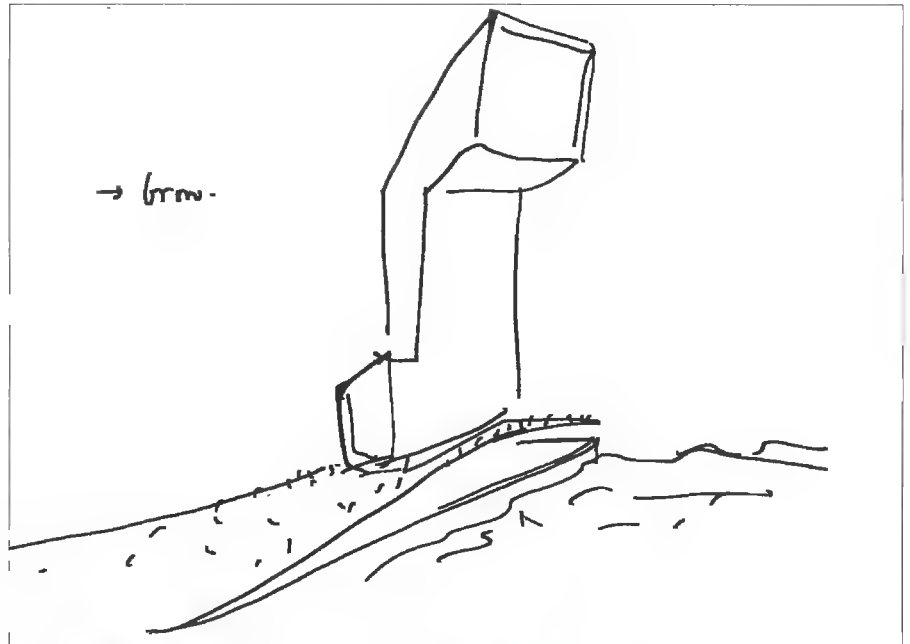
The tower is on the edge of the planning area, directly overlooking Weerwater, the artificial lake at the heart of this sprawling, polynuclear polder town. The building has been conceived as a Dutch version of Schiporeit-Heinrich's Lake Point Tower of 1968, an autonomous object standing on the boundary of Chicago and Lake Michigan.

The cut-out form of the volume results in completely different views from all four sides of the building and reinforces the logo-like singularity of this building. At the same time, it manages to cater to the practical demands of the market: there are plenty of takers for the top and bottom levels of a tower, far fewer for the middle section. The middle has therefore been reduced to a minimum and the top and foot maximized.

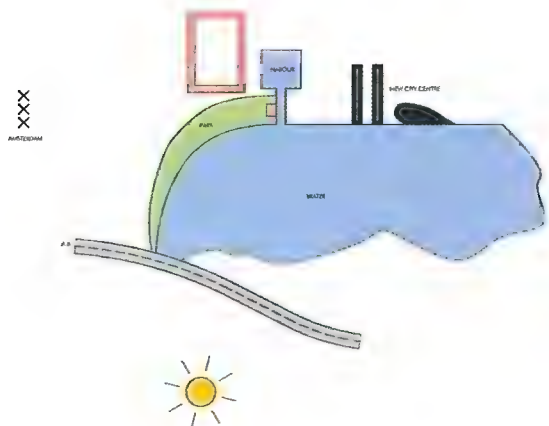
An equally rigid logic governs the distribution of windows, which is a direct reflection of the rooms they serve. Each window is positioned symmetrically vis à vis the central axis of a room, and the surface area of glass is a fixed percentage of the floor area of the room behind.

The corrugated aluminum cladding is like a tight skin that has been pulled over the building.

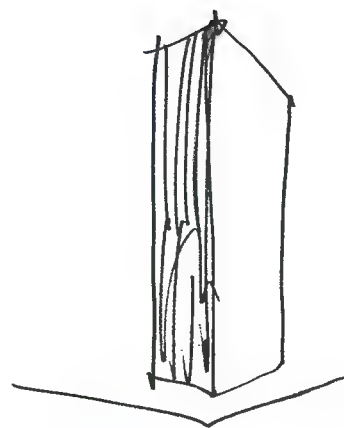
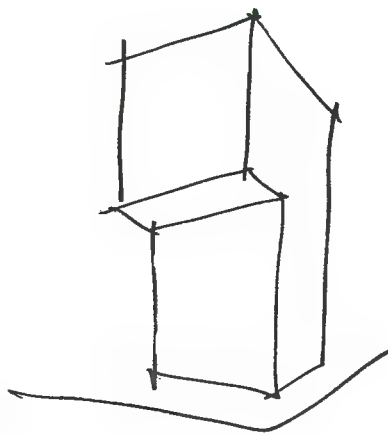
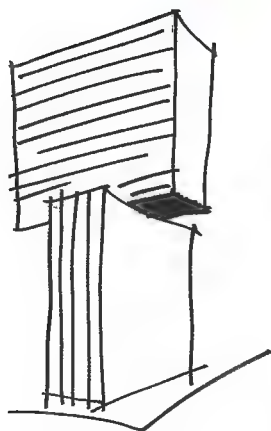
Photographs: Luuk Kramer



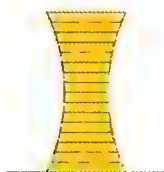




The surface area proportioned to each window is a fixed ratio of the area of the room behind it. Following market demand -apartments at the top and bottom being the preferred choices- the middle section of the tower is narrower than the top and bottom sections.



market preference

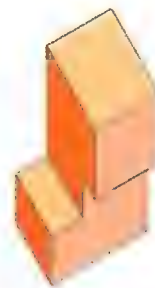


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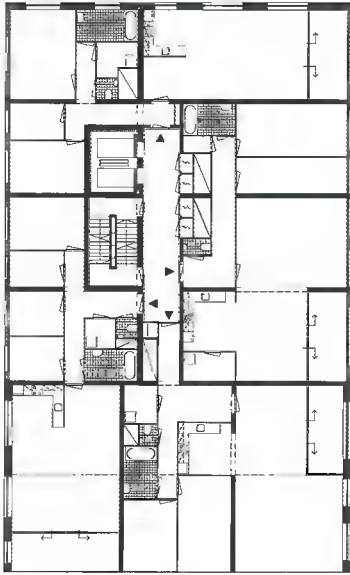
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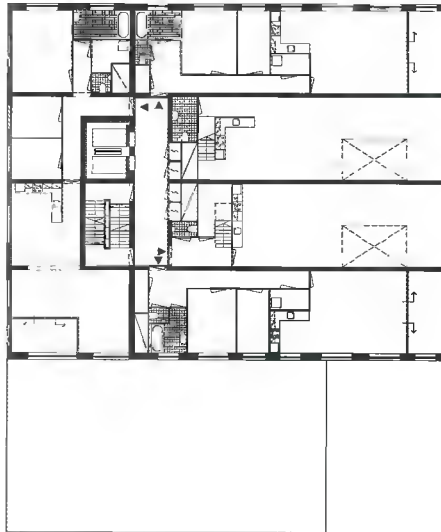
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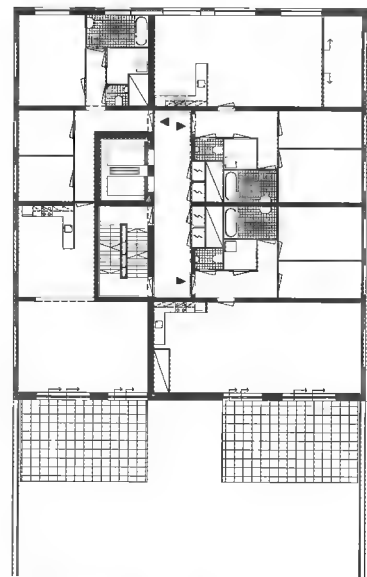




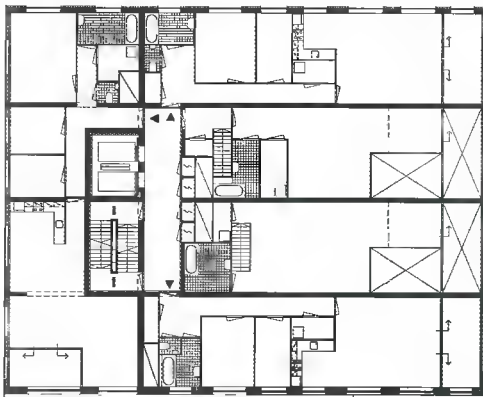
Floors 2 and 6



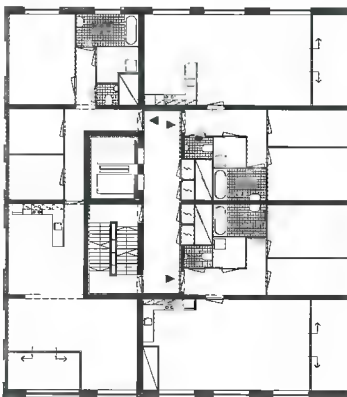
11th, 13th and 15th floor plans



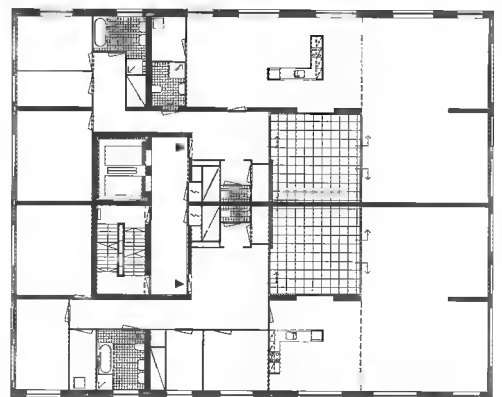
7th floor plan



12th, 14th and 16th floor plans



8th and 9th floor plans



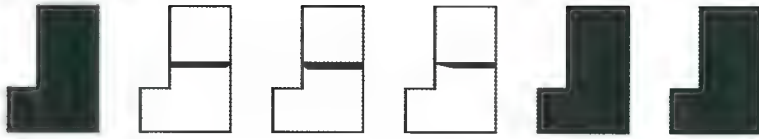
17th floor plan





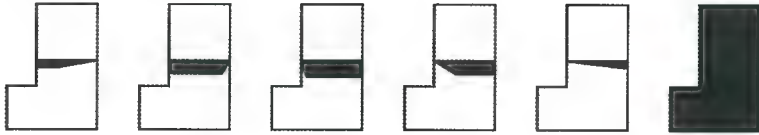
Study of shadows

Winter

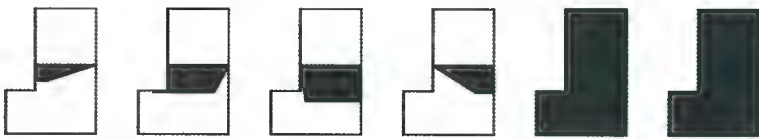


The cut-out form of this apartment building results in different perspectives of each facade. This singularity, along with the aluminum cladding which wraps around it, makes it a local landmark.

Spring / Autumn



Summer



8.00

10.00

12.00

14.00

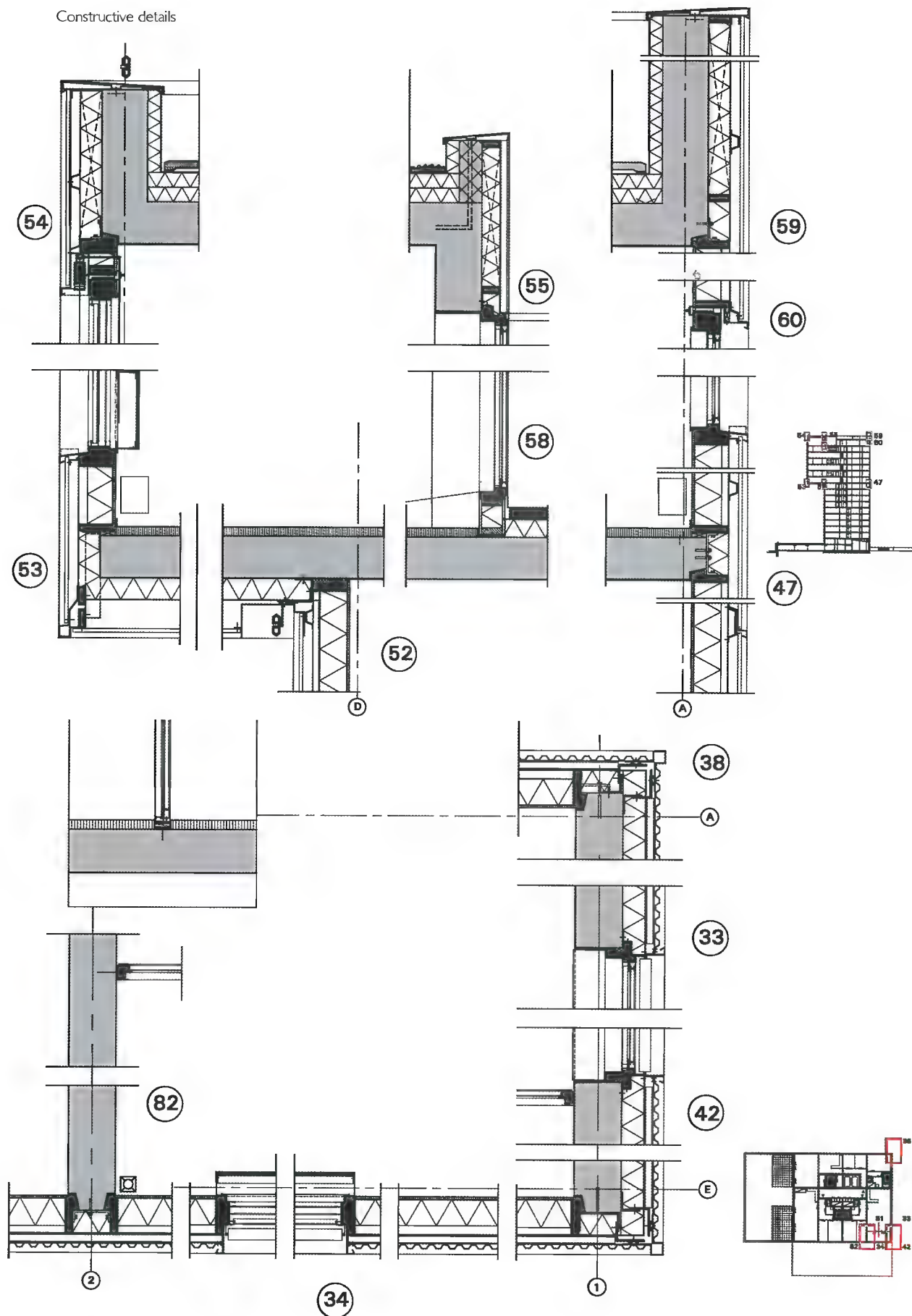
16.00

18.00

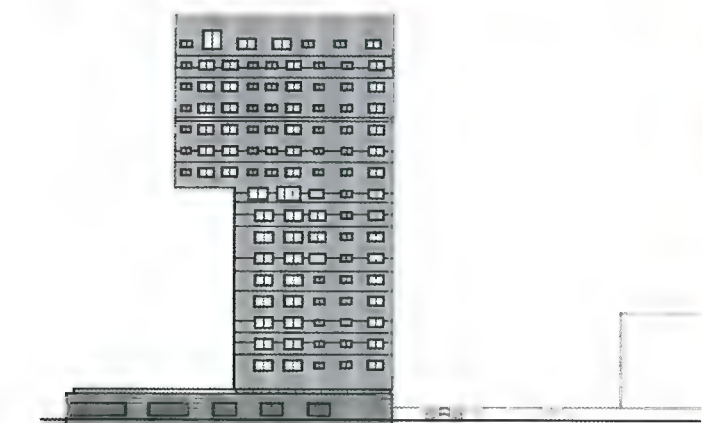
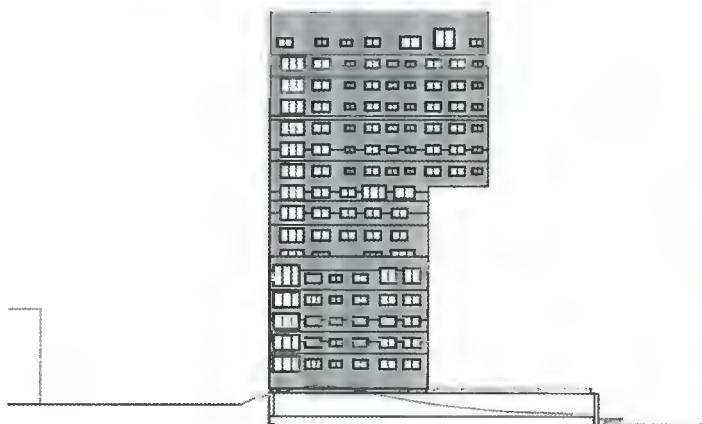
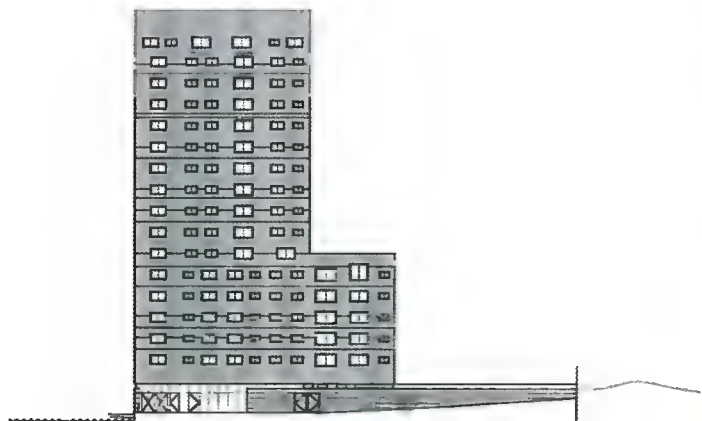




Constructive details









Francis Soler *Rue Emilie Durkheim*

Paris, France

In this apartment building the idea of a totally flexible project in time served as guideline for the choice of the structural concept. A discontinued concrete "curtain" stretches across the longitudinal axis of the building. It is occasionally doubled to form vertical shafts such as staircases and elevators, which serve as bracing for structural stability. 73 columns, placed according to an irregular grid around the circumference of the floor plates, leave great liberty concerning the floor plan and the distribution of all the inner portions.

In the design of the facade, the idea was to provide floor-to-ceiling glazing in each apartment, with sliding frames to avoid space loss. The outer frames are made of black lacquered aluminium, and the inner frames are made of wood. The coloured, enamelled images are printed on the exterior glass facade. The narrow floor bands of the balconies are fixed to the circumference of the floor plates. There is no continuity of material to avoid thermal bridges.

In winter, cold outside air enters beneath the lower part of the outer aluminium frame, heats up in the intermediate glazed space and flows into the apartments through inlets in the upper part of the inner wooden frame. This effect has been taken into account for calculations. The double facade and this type of air circulation also provide a noise reduction.

The Jatoba wood boards of the balconies are an extension of the coloured resin floor inside. As a consequence of the structural principle all the inner partition walls are made of Placopan or Placostil, allowing flexibility for later changes.

The walls and the ceilings are coated and painted white. Articulated metacrylate panels separate the kitchen space from the living area. In the bathroom red plastified wood boards with aluminium frames were preferred to the traditional tiles.

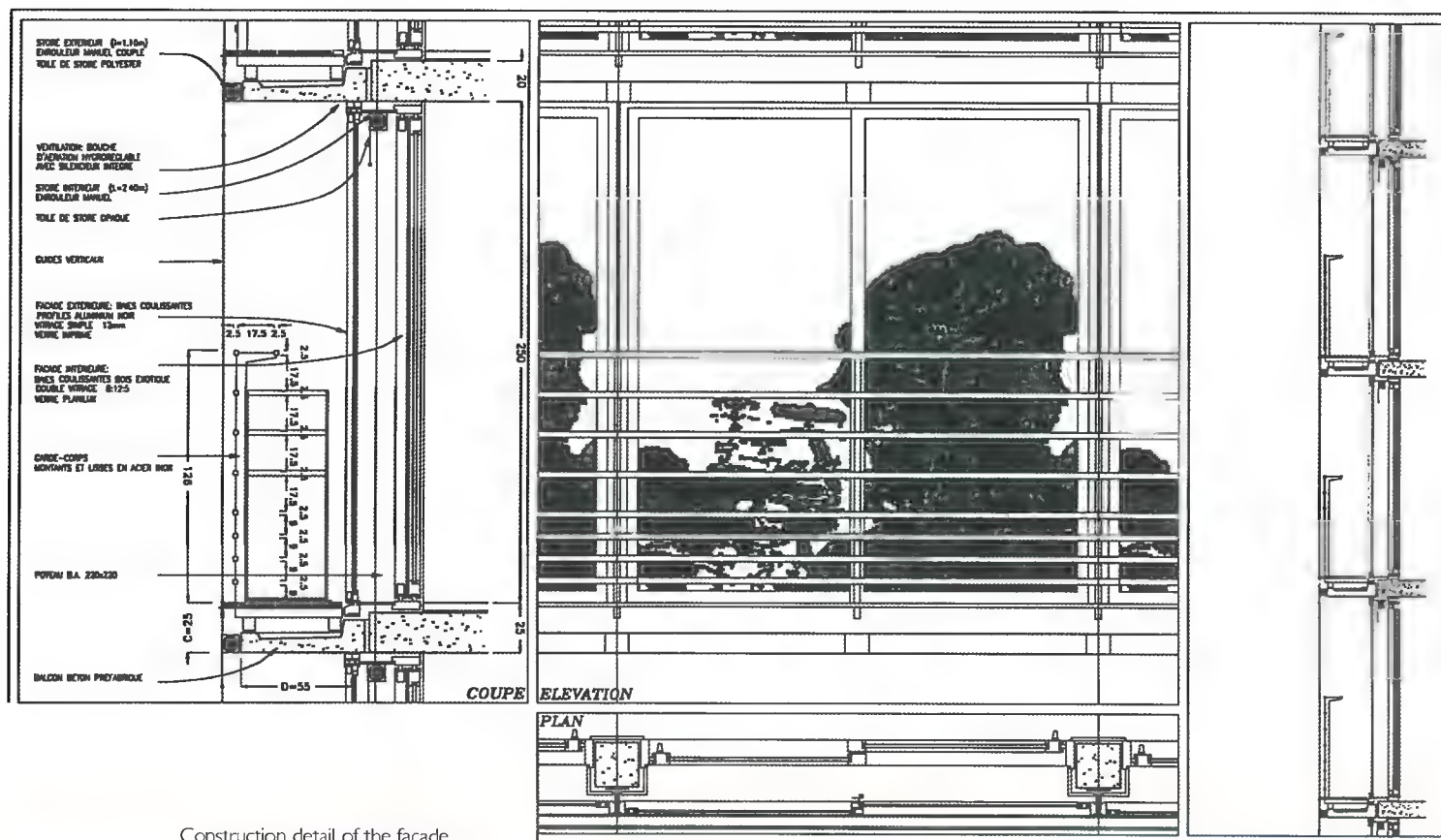
Photographs: Nicolas Borel





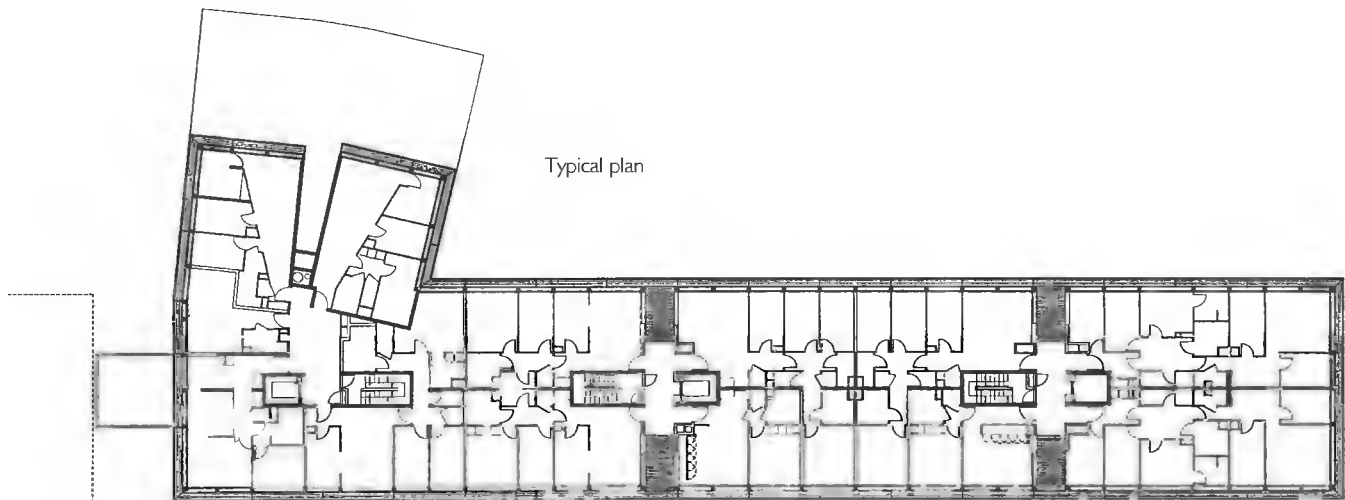
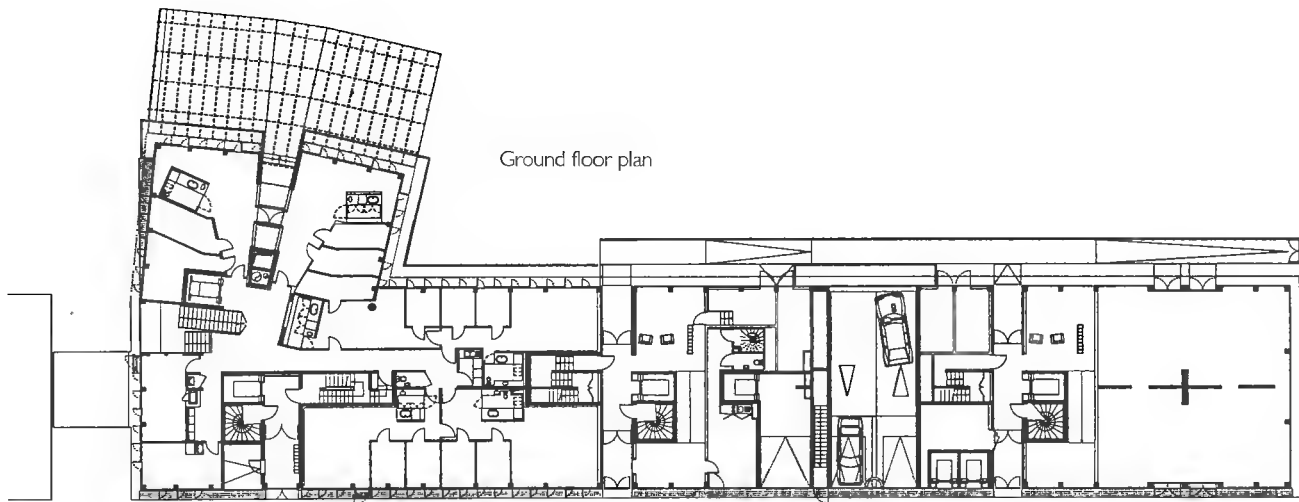
The brightness of the colours is enhanced under the influence of the light both by day and at night. The overlapping of different layers of images and texts gives the facade a dynamic and complex appearance.





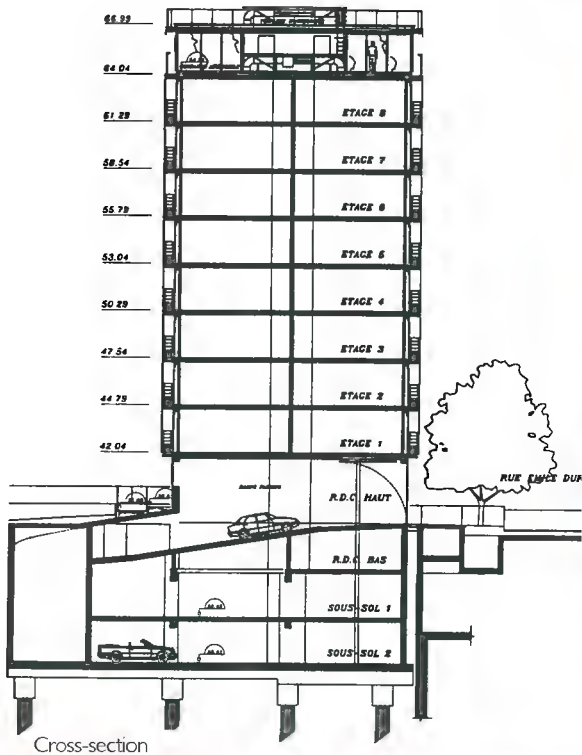
Construction detail of the facade





The wood used in the frames coexists in perfect harmony with the coloured resins of the pavements. The metal handrails of the facade provide rythm and a degree of geometrisation.





The accumulation of frescos allows the incoming natural light to be filtered, creating an appropriate atmosphere of intimacy in the interior spaces without the need for other types of filters.



Schmidt, Hammer & Lassen *Thorninghøj Housing Échème*

Kolding, Denmark

The characteristic ring-shaped site plan, which the Thorninghøj housing scheme had to respect, was the result of a site plan competition in 1988. Thorninghøj consists of 65 housing units and a common house, which lies on the summit of the site at a junction of the municipal path system. The housing scheme is divided into four groups with two and three stories.

The units have direct exterior access from a common stairway to the first floor, where there is access to the units via a small stairway, as well as from suspended balcony corridors on the second floor with stairways at distinctive locations.

The buildings are built as large timber structures of oil-treated redwood, which in time will weather to a characteristic silver-grey.

All of the bays are of reddish-yellow, rough surfaced brick. The final colour harmony will be achieved when the facades are weathered.

The windows and doors are dark with distinctive ventilation grills in co-ordinated colours. The windows in the brickwork are painted white. All the buildings have broad eaves, which protect the balconies as well as the facades.

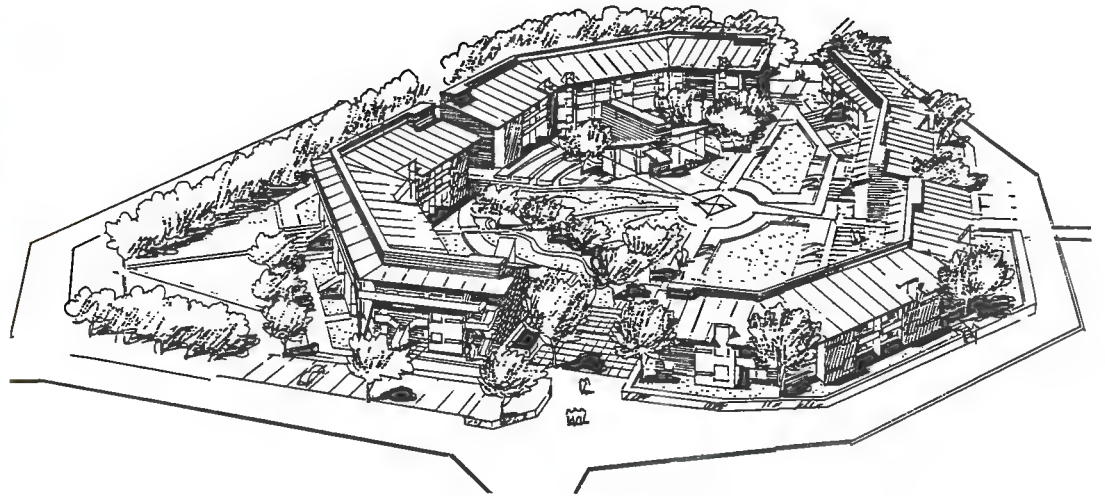
Photographs: Jens Nygaard

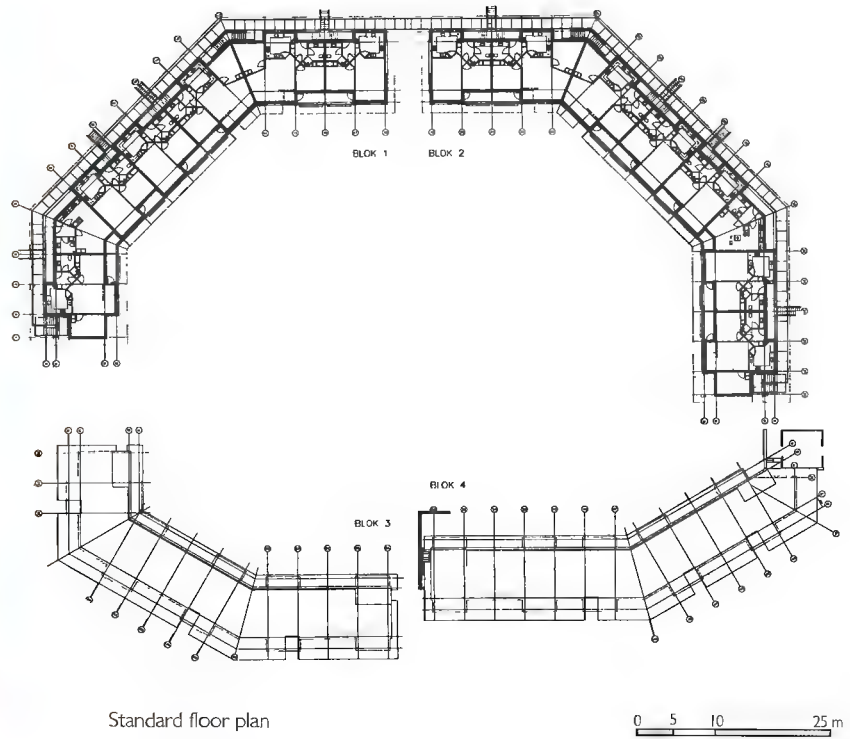






The buildings that form the housing complex were built using large structures of red sequoia wood treated with special oils for weather-resistance.



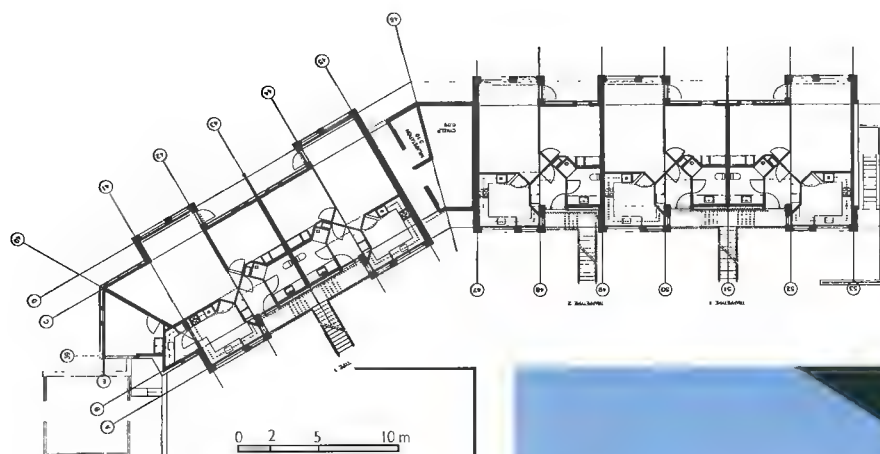


The windows and doors of the buildings were built in dark colours, with ventilation grilles in different colours. Everything is combined in harmony with the tone used for the wood on the exteriors.

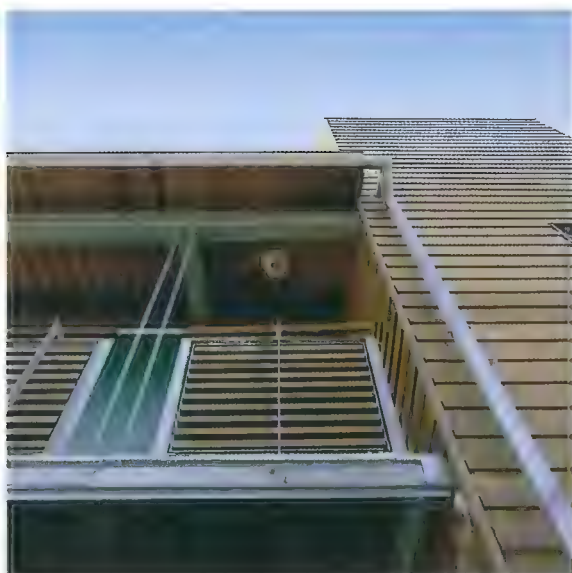
All the buildings of the complex have wide eaves that were installed in order to protect the balconies and facade from the weather.

Each housing unit has direct access from the outside by a common staircase that goes up to the first floor. In the housing unit, with 65 units of two and three floors plus a common building, attention was paid to the interiors in consonance with the exterior.





Typical plan of the apartments



Herzog & De Meuron *Apartments on a long and narrow lot*

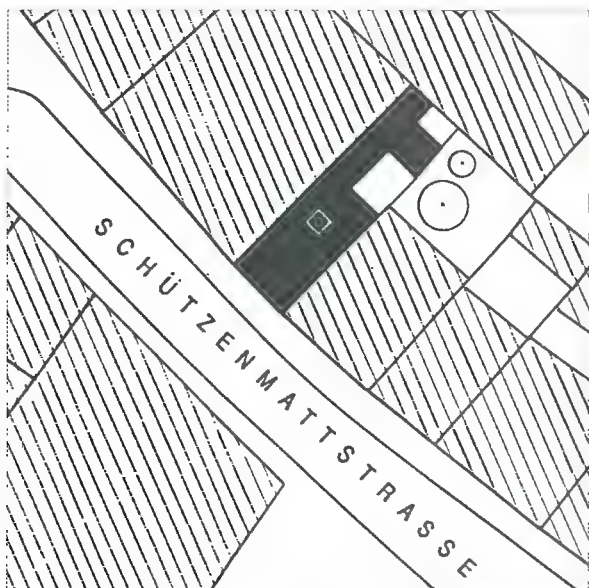
Basel, Switzerland

This commercial and apartment building was built on a parcel located within the city's medieval perimeters. Thus the long narrow measurements (23 by 6.3 metres) typical of medieval parcelling had to be accommodated. The architecture was strongly influenced by this parcel, which was utilised right to the back of the lot and exhibits a highly specific floor plan and section for life in a densely-built city. The apartments are grouped around a central courtyard aperture that opens on one side to the neighbouring parcel to the south. This side opening was not only intended to let light and sun reach the apartments but also to allow for the enjoyment of the branches of a large tree in the neighbour's yard. Like a periscope, the courtyard is recessed floor-by-floor to clearly separate the individual apartments.

The stairway has been separated from the elevator shaft to gain area for the central living space. The apartments are entered directly from the elevator. The stairs at the end of the parcel are an open construction, thus fulfilling the additional function of a small loggia.

On the ground floor, a two-story hallway leads from the street along the old parcel wall and allows access to the Swiss Fire Fighting Museum located in the back courtyard. The street facade is made completely of glass and is protected by a cast-iron curtain construction that can be folded back piece-by-piece at will. Wavy light slits lend the curtain construction a flowing textile-like feeling. While the construction hides the living space behind it, its heavy cast-iron material serves as a counterweight protecting against the noisy street side. In form and material, the facade components are related to sewer grates and to the protective grills placed around the trees.

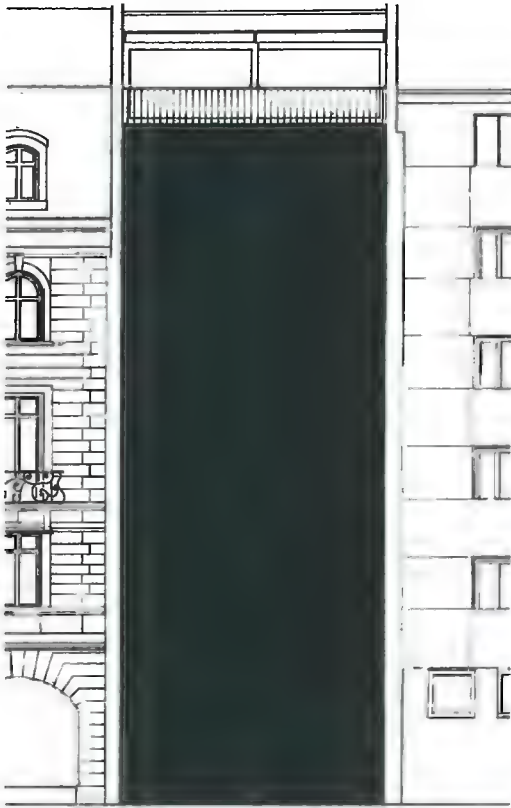
Photographs: Margherita Spiluttini



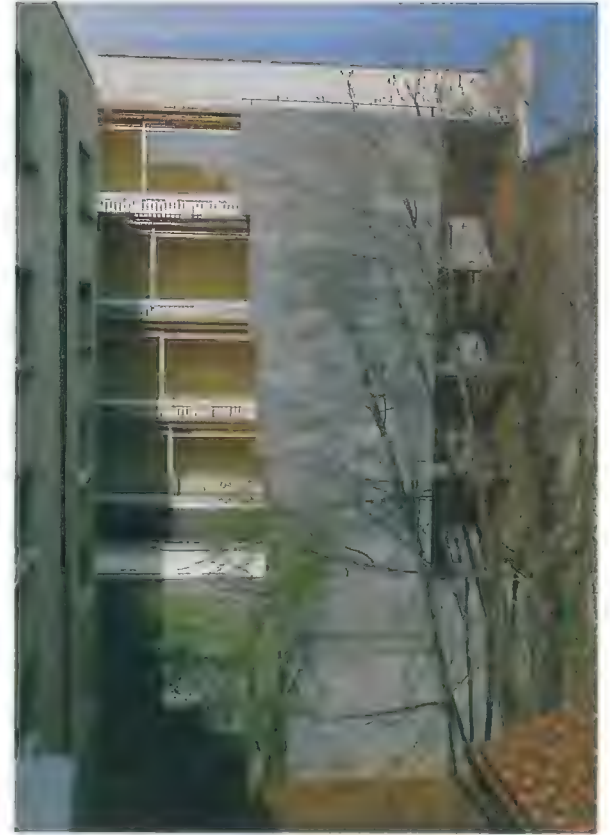


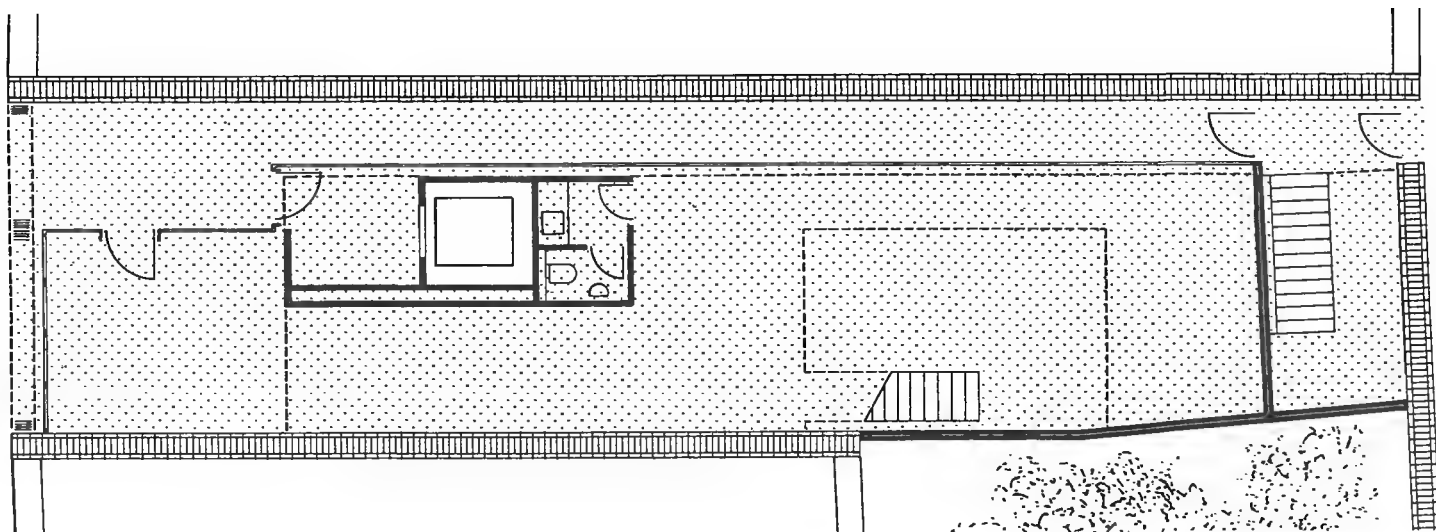
Front view of the main facade, characterised by the unusual cast iron curtain, which as it sways endows the whole scene with fluidity and dynamism. The detail below shows how the individual links of the curtain are joined together.



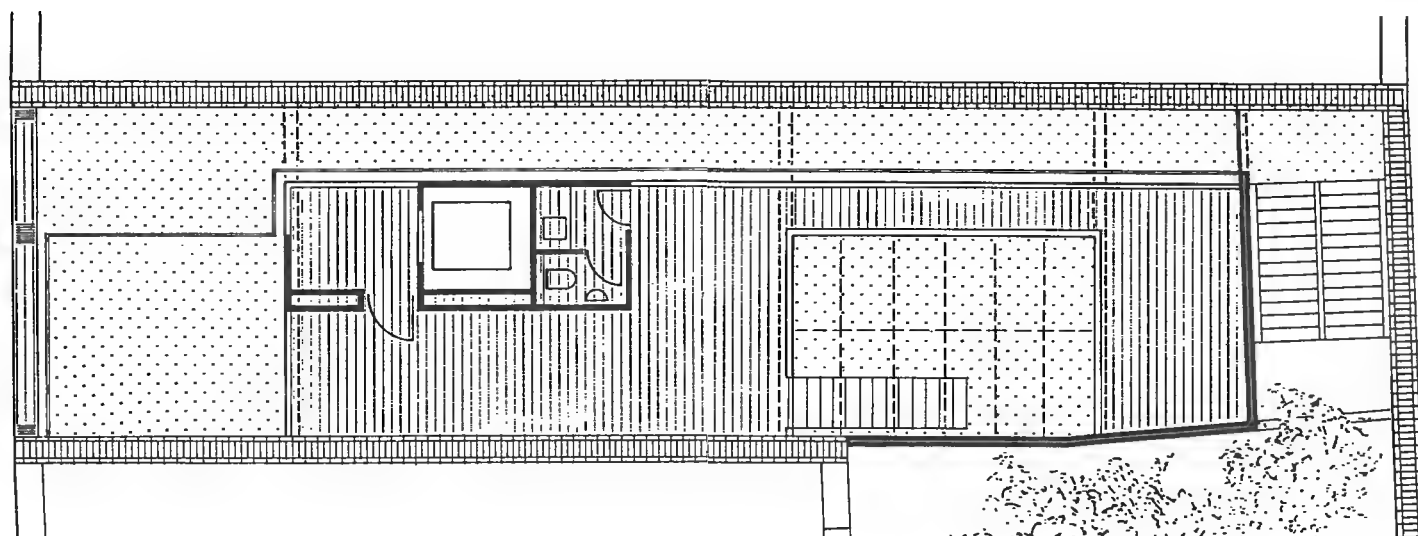


The apartments are grouped around a central courtyard, which is open to the south to take full advantage of natural light and the existence of a large tree standing nearby. The apartments seen from the central courtyard. The outside walls are almost totally glazed, although here they are shown protected by wooden blinds.

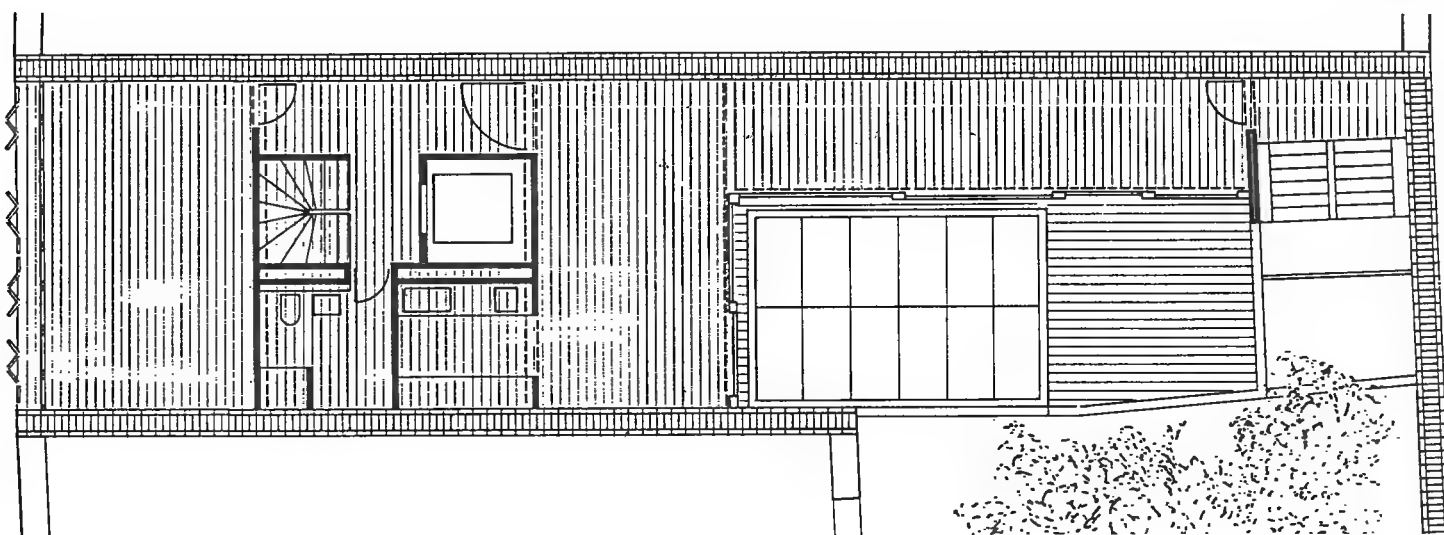




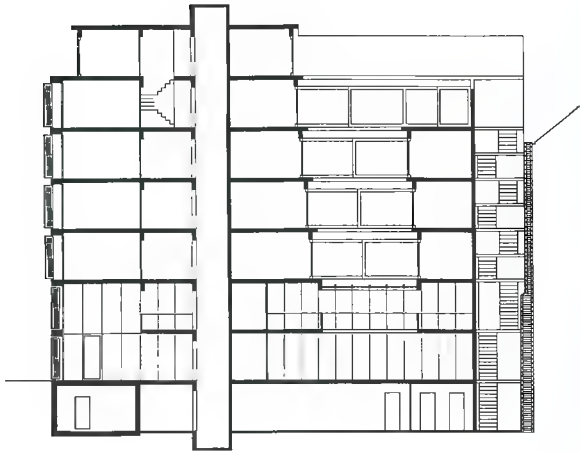
Ground floor plan



First floor plan



Fourth floor plan





Behnisch & Partner *Social Housing in Ingolstadt-Hollerstauden*

Ingolstadt, Germany

This apartment complex has been designed to provide accommodation for those who currently do not have adequate housing - large families, single mothers, students, and senior citizens. It will house approximately 300 people.

The buildings are located northwest of the city of Ingolstadt, near two other Behnisch buildings, a Montessori school, and a kindergarden. They are part of Hollerstauden, a residential district. The original development plan proposed mainly public buildings for the site; however, when it became clear that there were insufficient public projects for the allocated area, part of it was made available for further residential development.

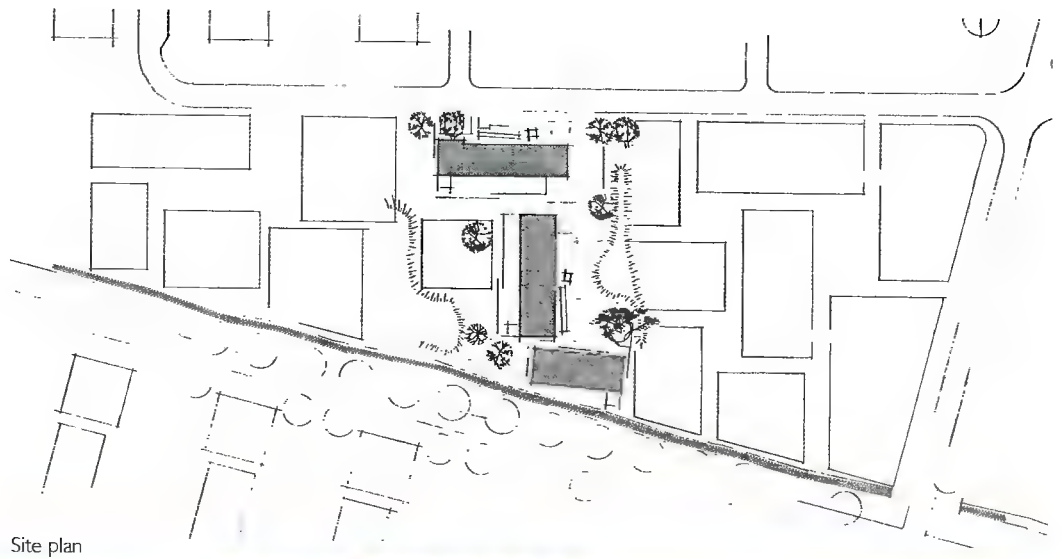
While the building's typology would no longer be very distinguishable from that of its neighboring structures, the strategy was to make it so via form and pattern. In contrast to the existing rows of four and five-story apartment blocks, the new complex is conceived as a dense carpet of two to three story buildings. The area is accessible for pedestrians from all sides. Private sun-filled gardens and a sequence of varying courts and gardens near each entrance emphasize this alternative pattern. The concept of usable public spaces is well developed, as seen in these courts and gardens as well as the presence of benches, public bicycle parking spaces, and paths linking the blocks. The external staircases and halls have been carefully covered by transparent roofs, which offer protection from the rain while allowing sunlight in. Aside from the stairs, the upper levels can also be accessed using the elevators, which are also external, with transparent walls to give a wider sense of space. Colorful facades and varying materials add richness and depth to this distinguished set of homes. A total of thirty apartments were completed in the course of the first building phase.

Photographs: Behnisch & Partner, Christian Kandzia





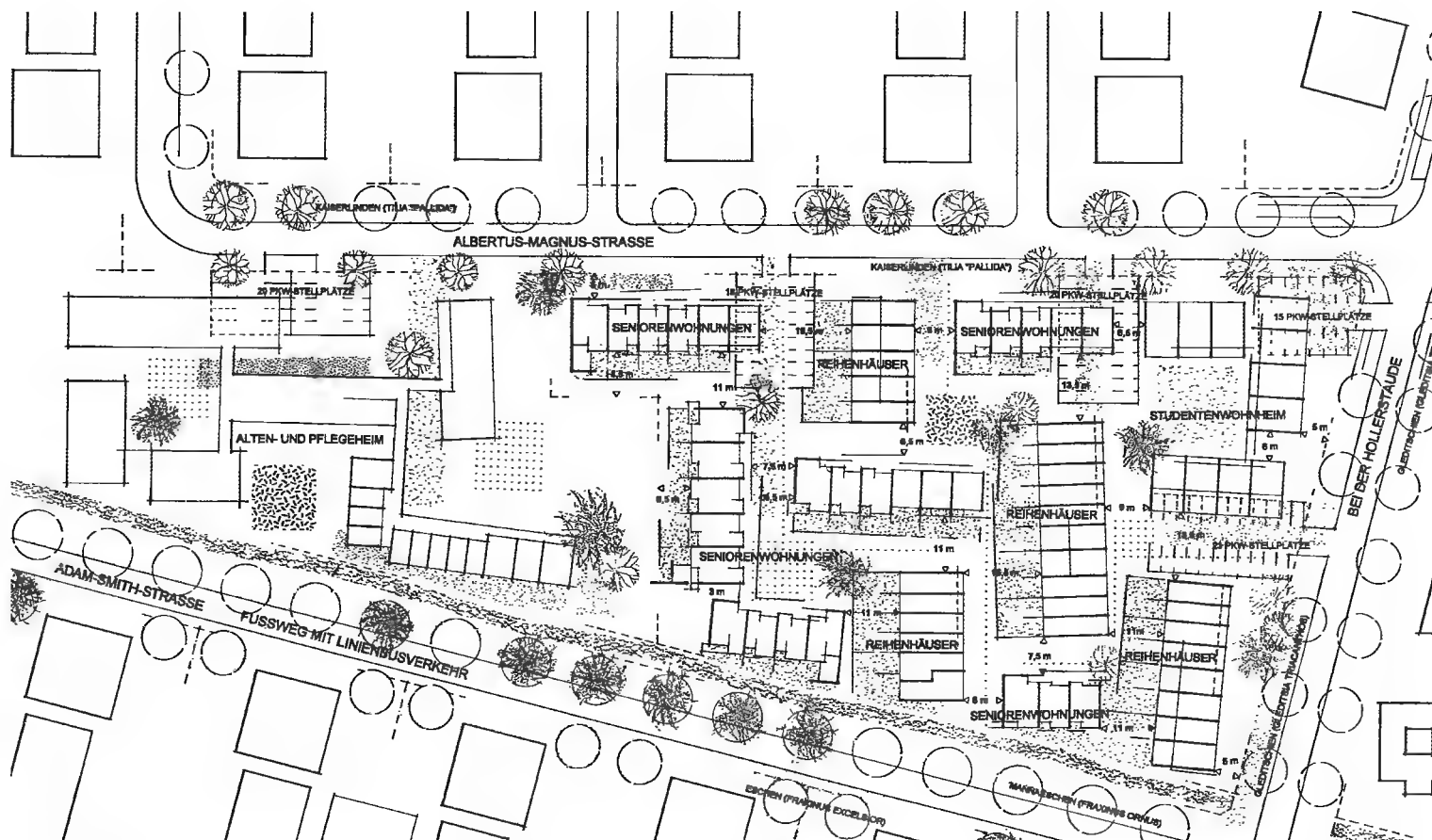
The project includes various public gardens amidst the apartment blocks. Transparent roofs covering the stairwells and external corridors heighten the feeling of spaciousness while at the same time providing shelter from the rain.



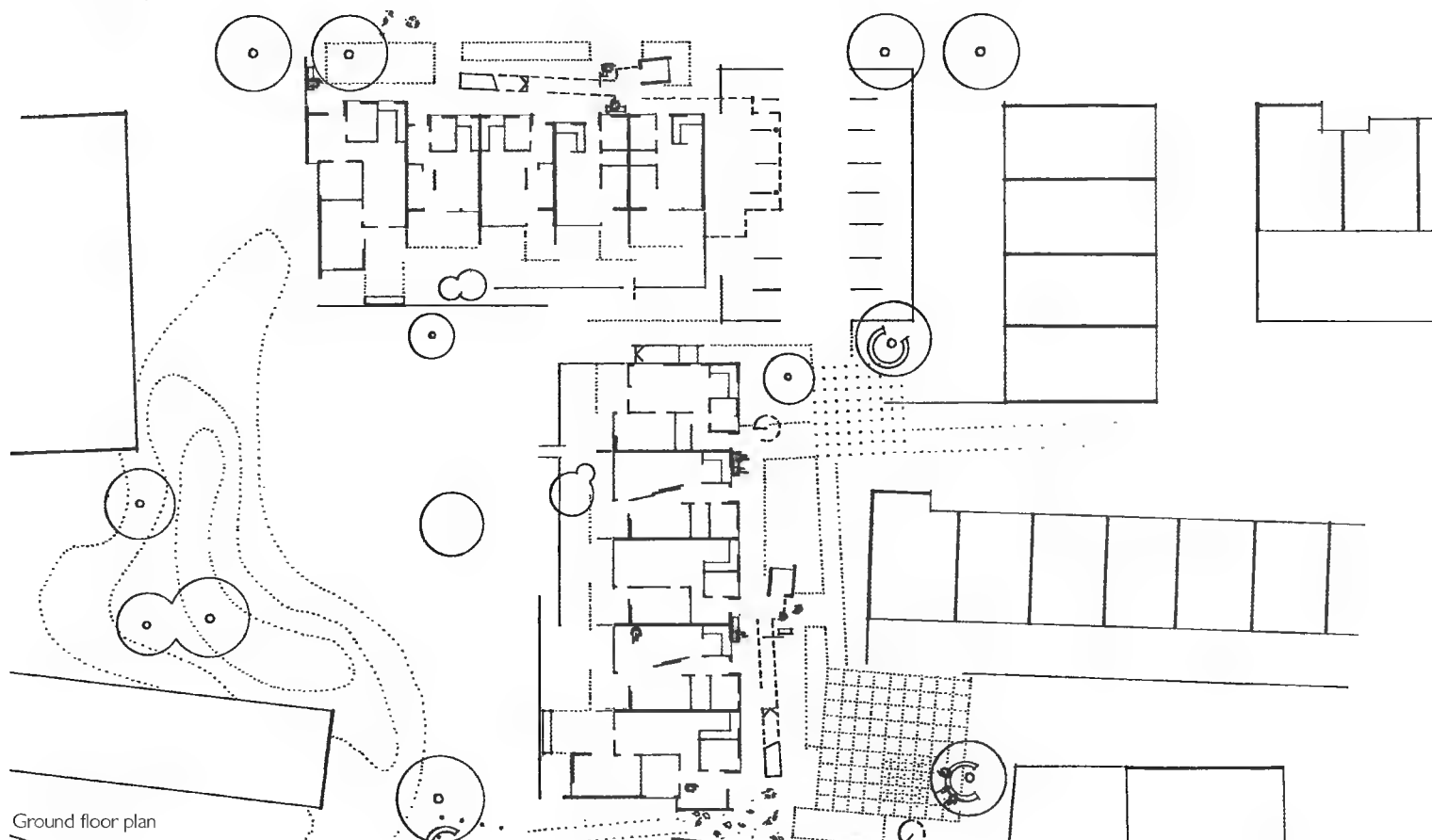
Site plan





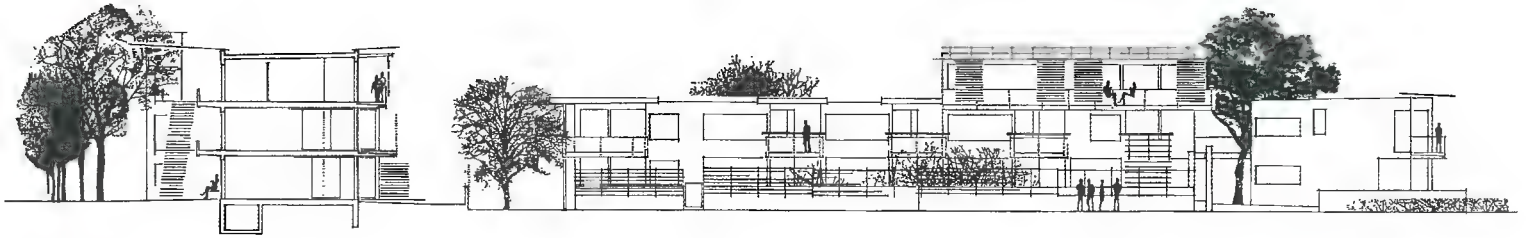


Plot distribution plan



Ground floor plan

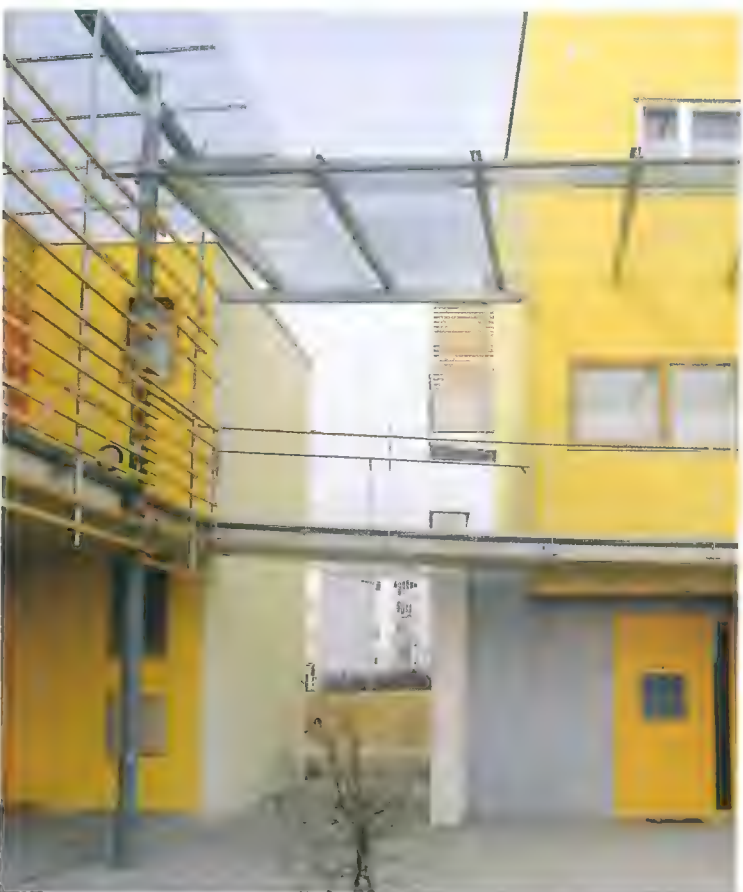




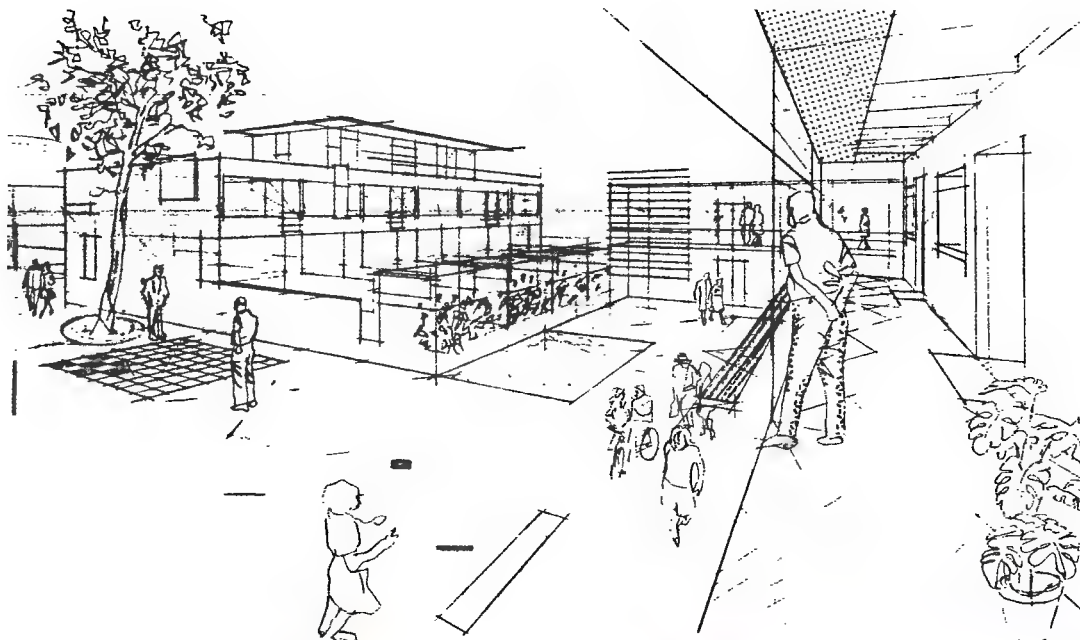
Cross section

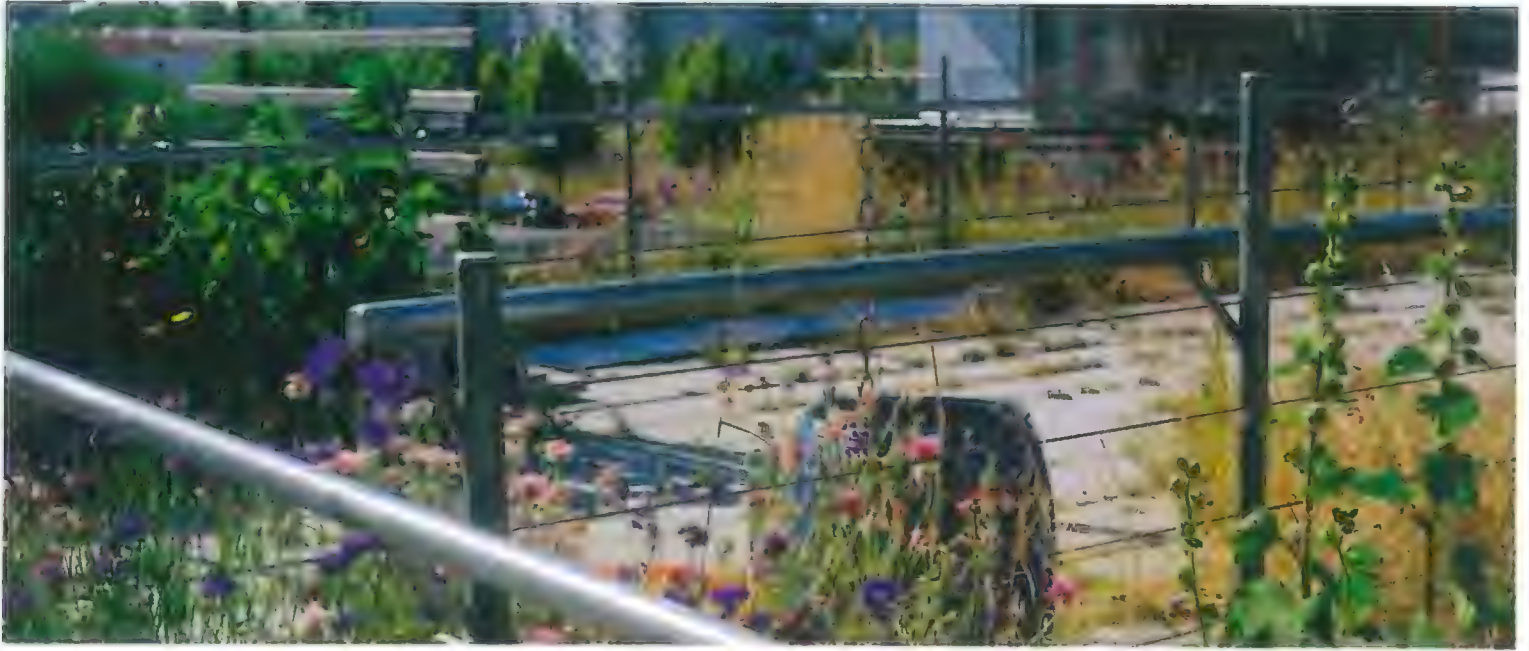












Phillippe Gazeau *Postmen's flats*

Paris, France

"La Poste" commissioned the organisation in charge of building welfare homes for its employees PLA (prêt locatif aidé) flats for young postmen arriving to work in Paris. The Post Office wanted to give them the chance to live in flats in the city centre, their place of work, so they would not have to make long journeys on the underground.

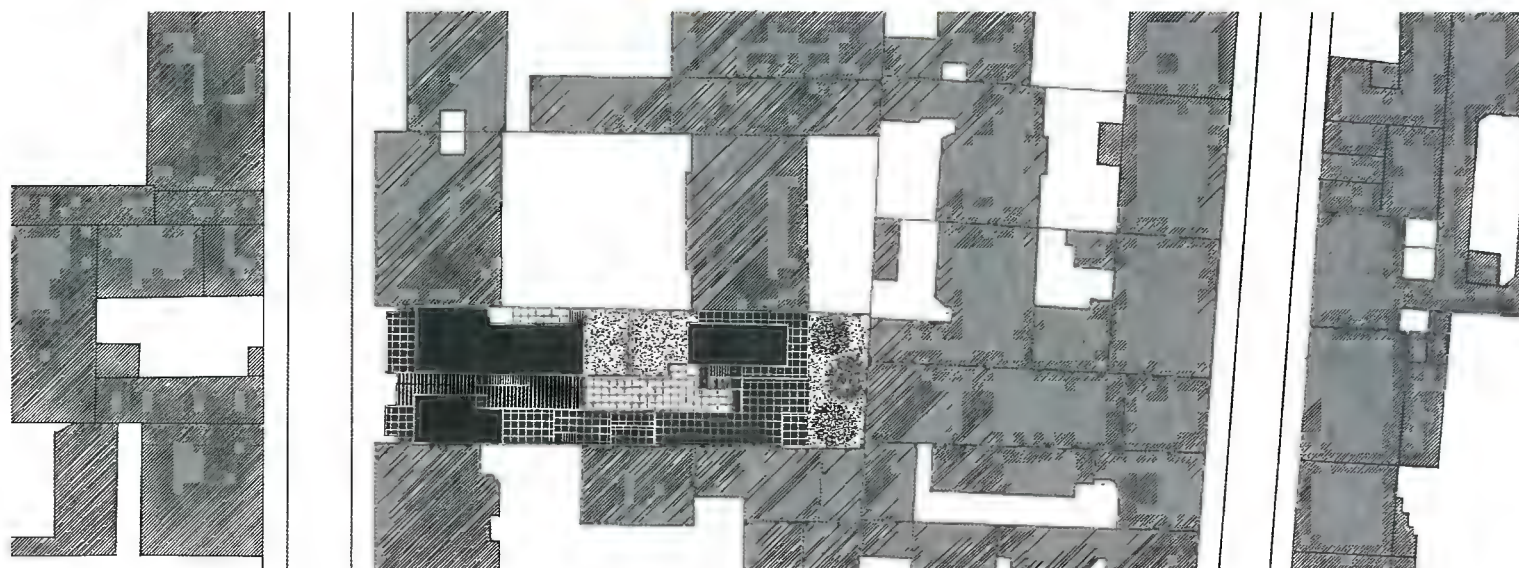
Although most of the dwellers were single, special "studios" and two-room flats had to be built for the married couples. An additional area for temporarily accommodating children was provided for young couples.

The land allocated to Phillippe Gazeau was on rue de l'Ourcq in the 19th arrondissement, a working class district whose population density increased dramatically in the sixties and seventies. The district had no stylistic identity: It was almost entirely constructed this century.

Gazeau skillfully cut the building in two. This gave him two separate blocks to work with: one was 3.50 metres wide and 15 metres long, and was used for accommodating a "studio", the other was 7.50 metres wide. The building was therefore constructed around an empty space, a fault, defined by a large staircase, which does not overhang on the roadside but juts out at the back of the building.

The same attention to detail has been paid to both the interiors and exteriors, although more "precious" materials have been used for the exteriors to give the building the kind of dignity that is usually lacking in welfare buildings. Considerable attention has also been paid to the choice of materials: black brick, glass, aluminium and wood are skillfully combined. The facade overlooking the road is a composition of large glazed surfaces fitted with sliding aluminium panels to conceal the interior.

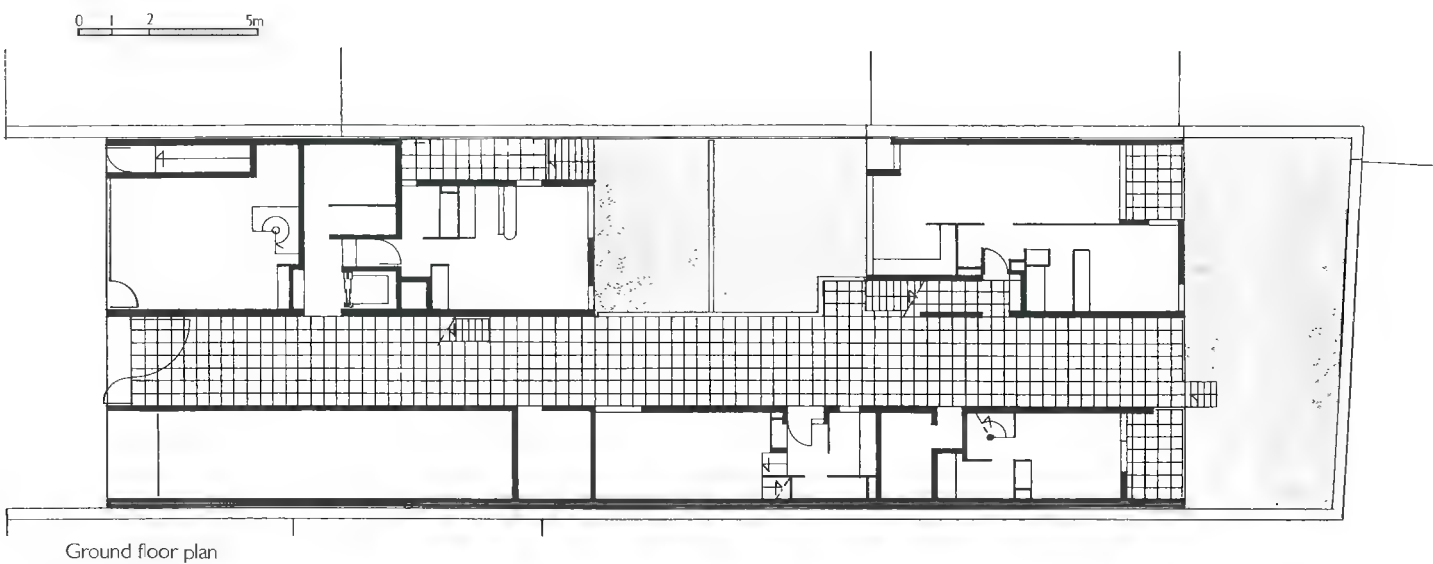
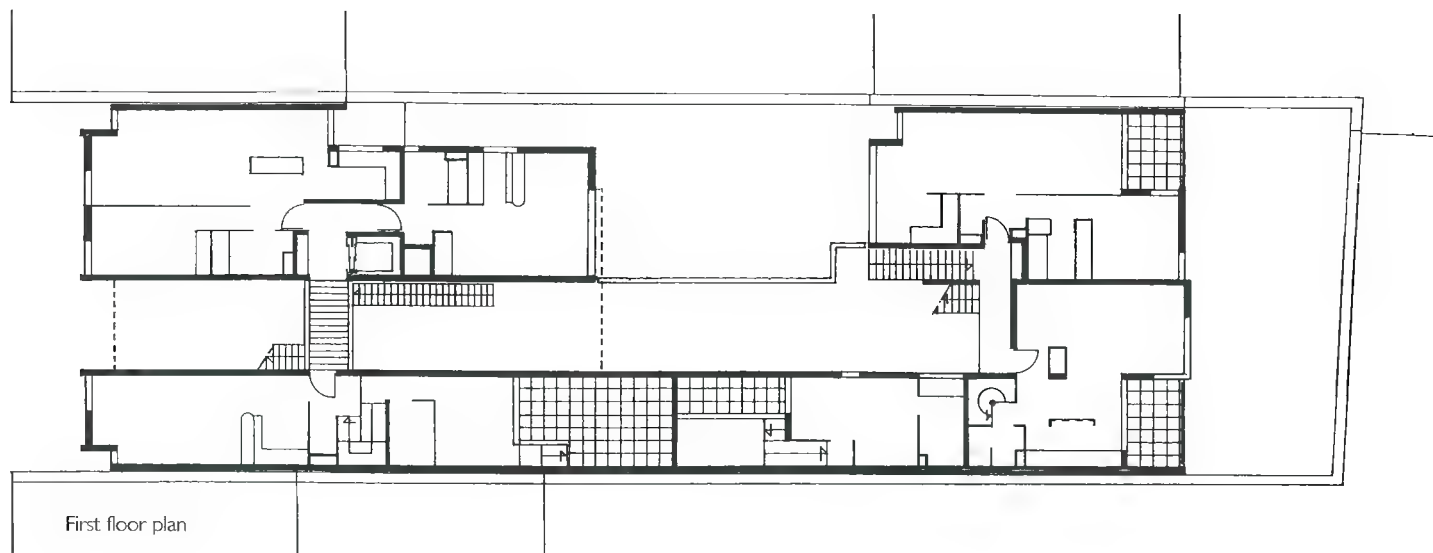
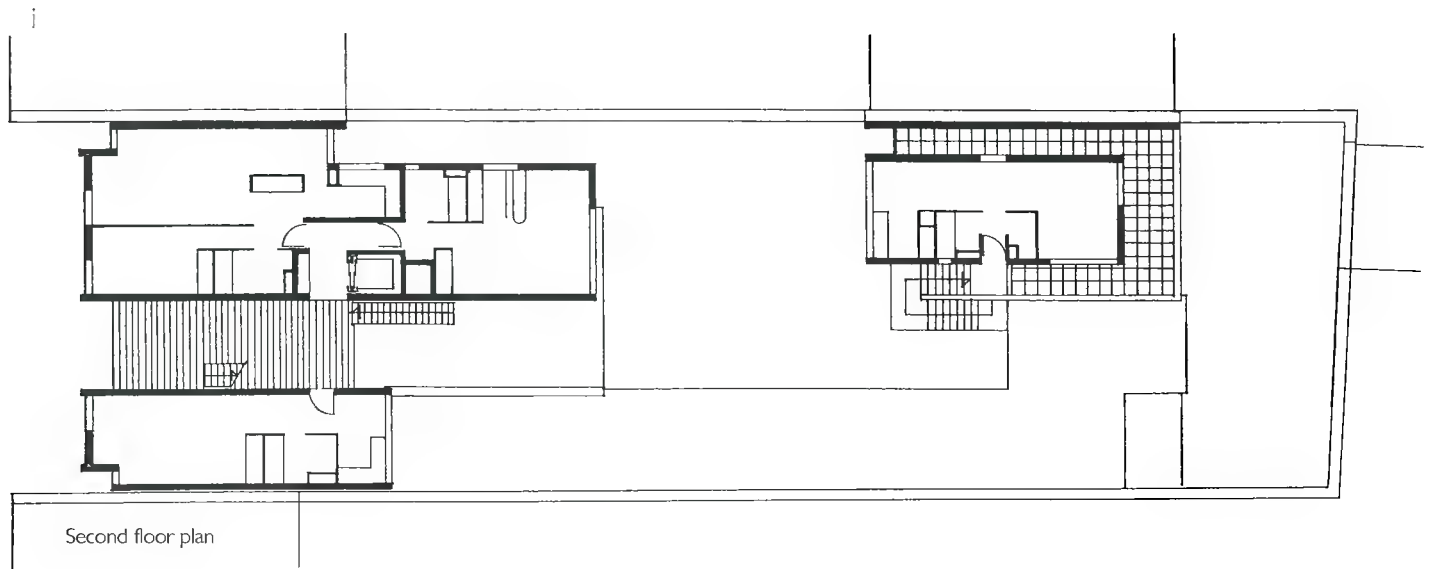
Photographs: Jean-Marie Monthiers





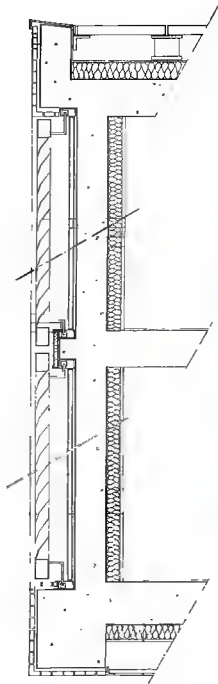




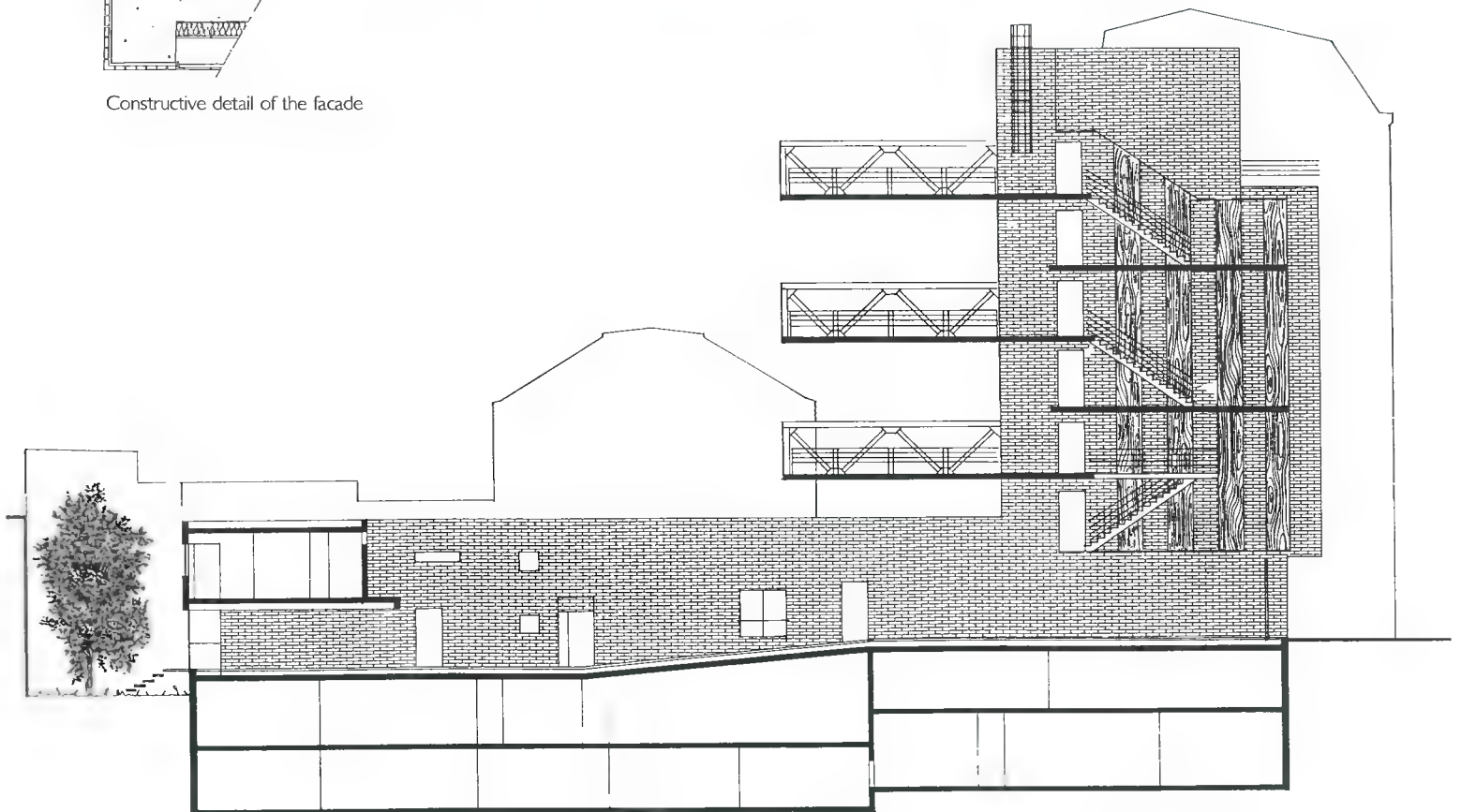


This staircase leads into the buildings and constructs a shared space where people can congregate, exchange a few words or just stop and watch what is going on below. The same attention to detail has been paid to both the interiors and exteriors.





Constructive detail of the facade





Kauffmann Theilig + Partner *Seniorenzentrum Burgbreite* *Wernigerode*

Wernigerode, Germany

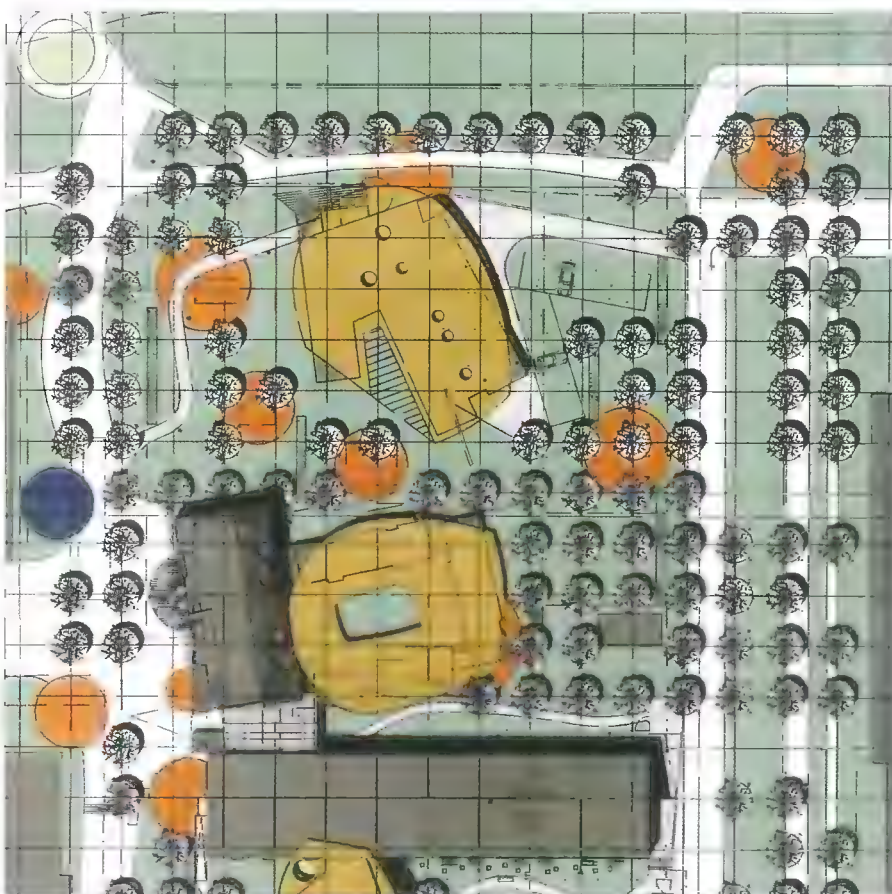
The project for the conversion, restructuring and extension of this senior citizens residence conserved the existing structure, and proposed the construction of a new section for senile dementia patients and a building with apartments for the elderly. The opportunity was taken to give a new identity to this environment, a quite dull area of gray lineal structures with prefabricated concrete elements.

The aim was to carry out tangible improvements in all areas of the project and to introduce a park in the center that could be enjoyed both by the residents and by the local people. This was designed as an open green carpet, with the new buildings distributed like pieces de furniture, drawing away from the uniformity of the environment's straight lines by means of more sophisticated geometric shapes and an apparently random layout.

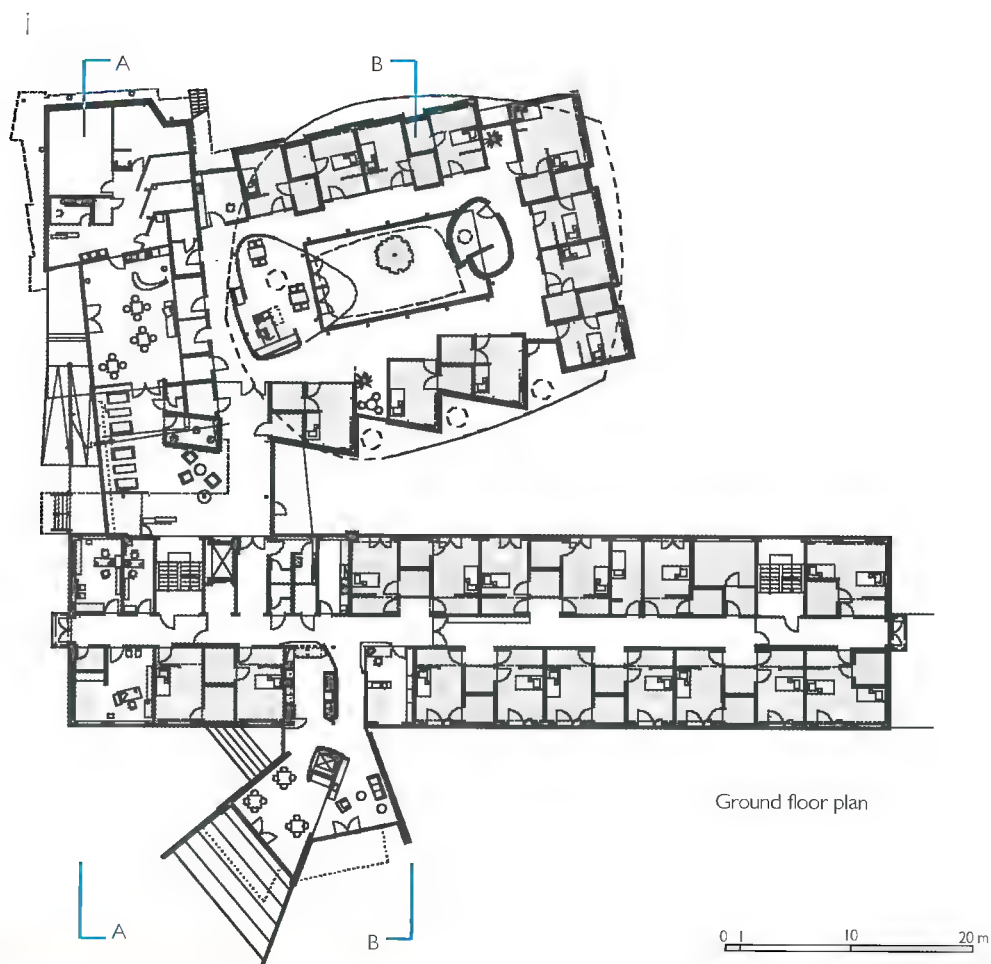
The lineal building, a structure of prefabricated elements put up at the beginning of the 1970s, required important restructuring. The windows have been enlarged at much as possible to allow the maximum entrance of natural light into the rooms and corridors. The wooden surfaces create a warm, attractive and "tactile" environment that makes it look more like a hotel than a hospital. Some platforms in various colors in front of each room facilitate orientation, enlivening the rigid layout of corridors and generating a certain sense of individuality. On the south side, the rooms have large balconies with wooden handrails that eliminate the division between inside and outside, drawing in the garden. On the north side, galleries extend the rooms while providing them with some outstanding views. The concept is complemented with "special" places to be discovered and to identify oneself with. Some proverbs and aphorisms lend humorous, sometimes profound, thoughts; they are come across on a window pane or when turning a corner. And there is more to be discovered: some cloth butterflies seem to go flying out of the window, two happy birds in the atrium add life to the space, ...

The building that houses the rooms of the residents requiring long-term attention is being extended, on the south side towards the garden, with a small tower that provides the shared spaces for eating, living, chatting, watching the television, etc.: a living room just like at home, a multipurpose space for social contact on every floor, which has even been thought of to invite the residents to take part in the household chores.

Photographs: Roland Halbe / Artur



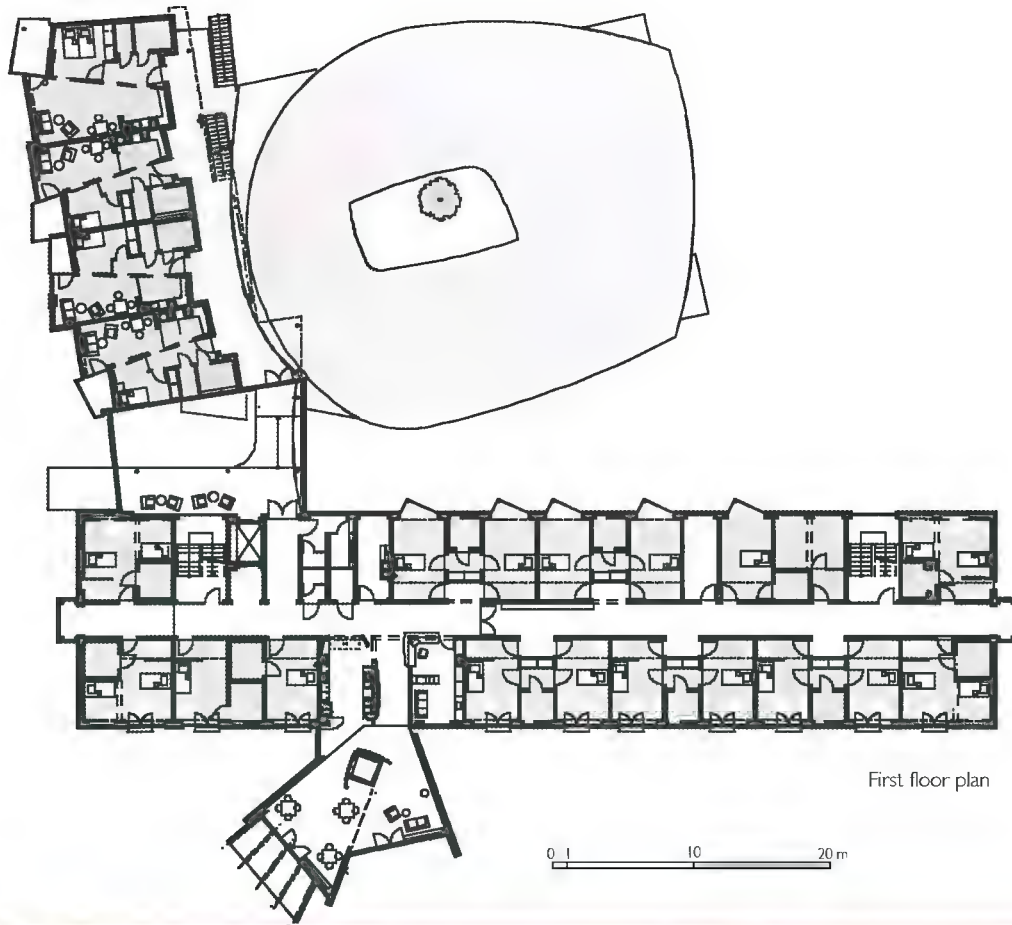




The complex is located in a park that not only integrates the different buildings but has converted into the real nerve center of the district: a privileged setting in which the residents can stroll and relax.



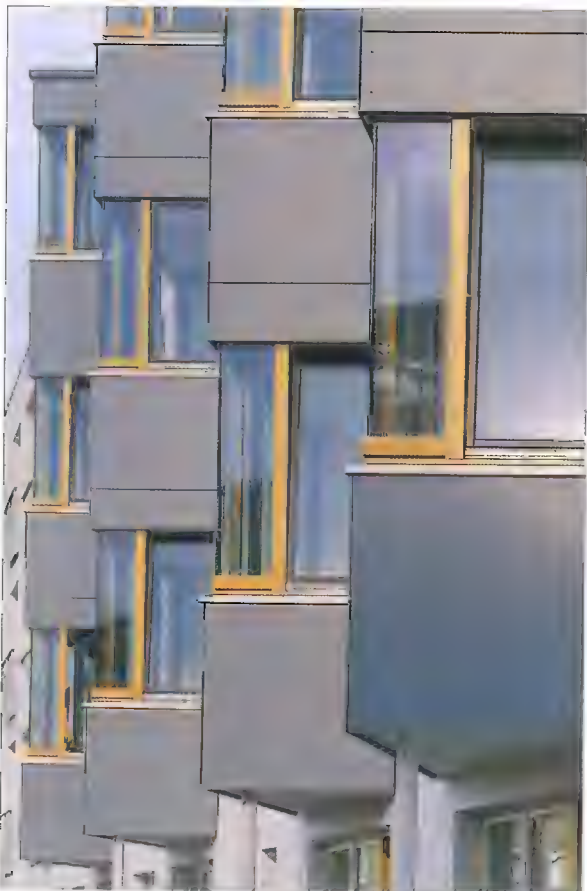




First floor plan







South elevation



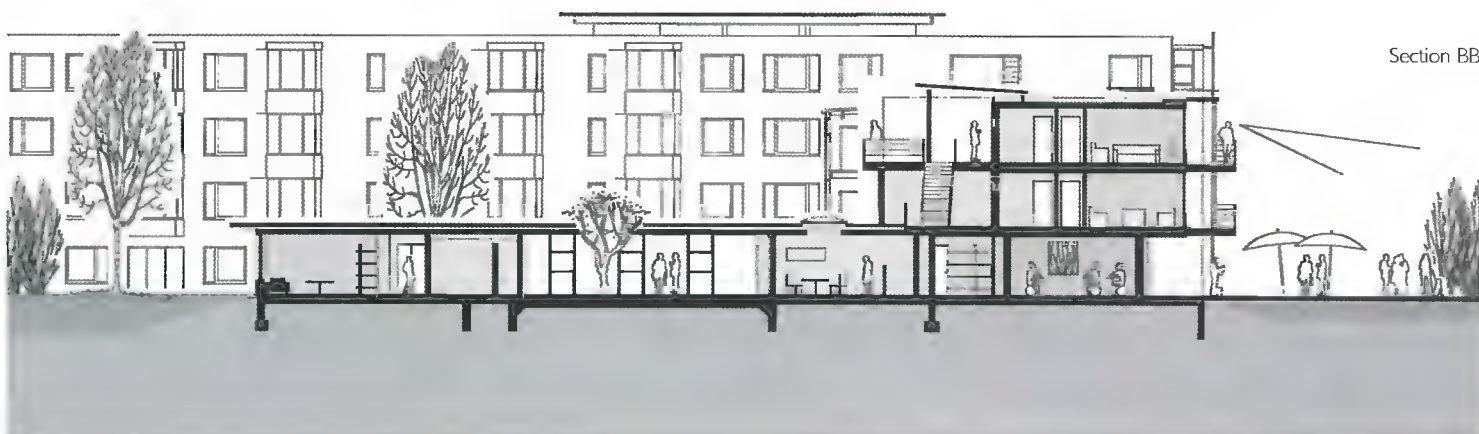
West elevation



Section AA



Section BB



Splitterwerk *Complex Red Tree Frog*

Bürmoos, Austria

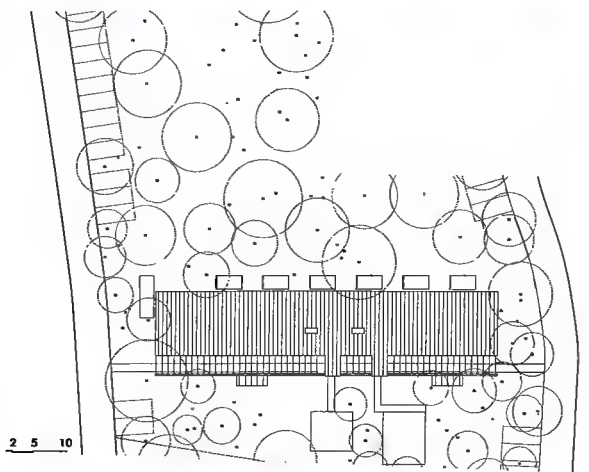
These twelve housing units were set on the northern edge of the plot in the midst of a beech grove. Any sacrifices to the woodland had to be compensated by new planting. In creating access paths, terracing and parking lots, efforts were made to maintain the permeability of the soil. A further requirement was the application of an economical and ecological construction system.

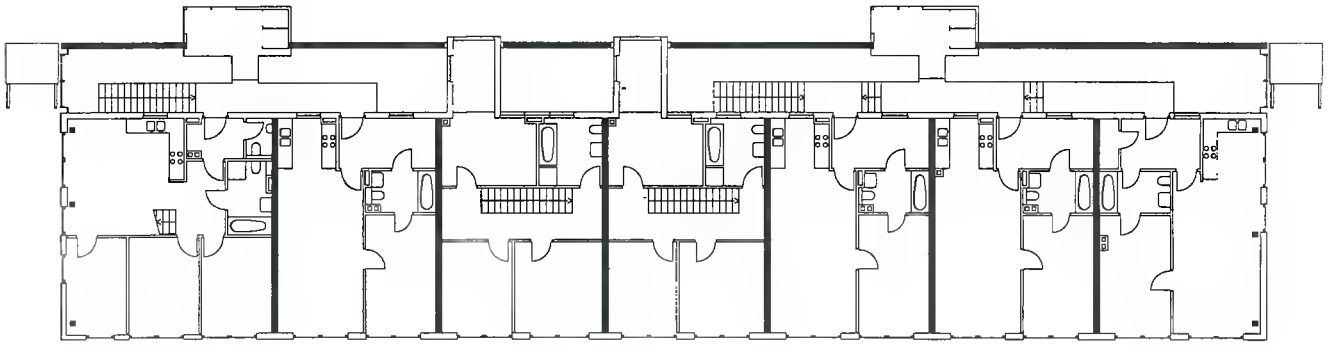
Both the positioning of the building and the layout of the interiors seek to make the most of the natural sunlight and save energy. The generously glazed living areas and bedrooms are situated along the southern strip of the elongated volume. On the northern band are the foyers, kitchens and ancillary facilities, on the inner side of a long communal space which concentrates the circulation routes while serving as a thermal cushion for the apartments. The two-story building adapts to the slope of the site in such a way that the dwellings are terraced, although the continuous roof line restores the formal unity. Each unit is different and the typologies range from small apartments to duplexes.

All are accessed from the communal space along the north facade. This three metre wide corridor is spacious enough to comfortably fit the steps that constitute the actual circulation route and a parallel strip of vegetation, besides the longitudinal footbridge that provides access to the second-floor homes and the perpendicular catwalks that lead to the lookouts projecting from the outer wall. These glazed openings and the longitudinal skylight turn the north corridor into a pleasant space to hang around. The strip of vegetation lining the inner facade adds to the environmental quality of the complex and helps to ensure the privacy of the rooms situated along this corridor. The south facade's cladding of red- and orange-painted timber strikes a contrast with the surrounding vegetation and with the concrete wall that closes the building to the north.

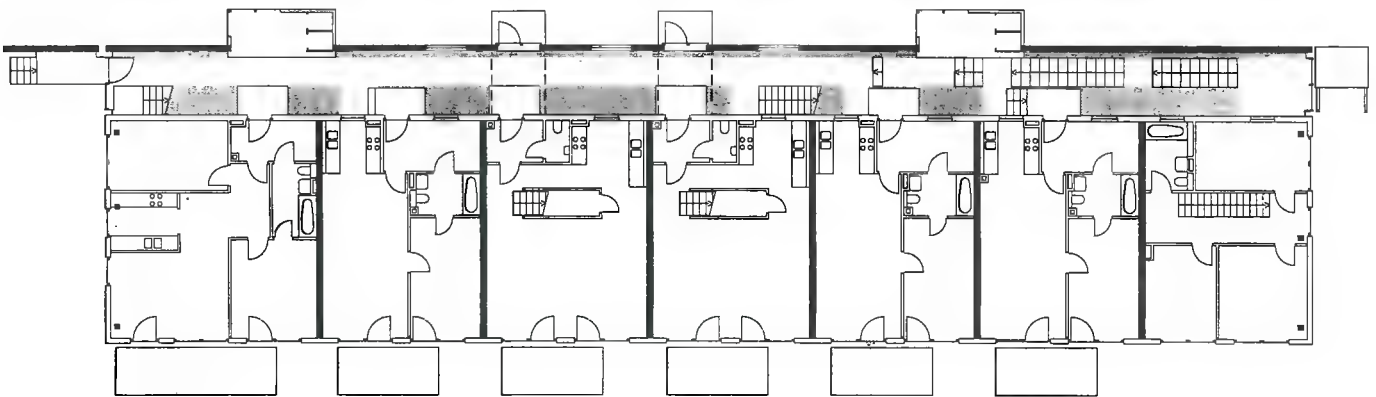
Photographs: Paul Ott



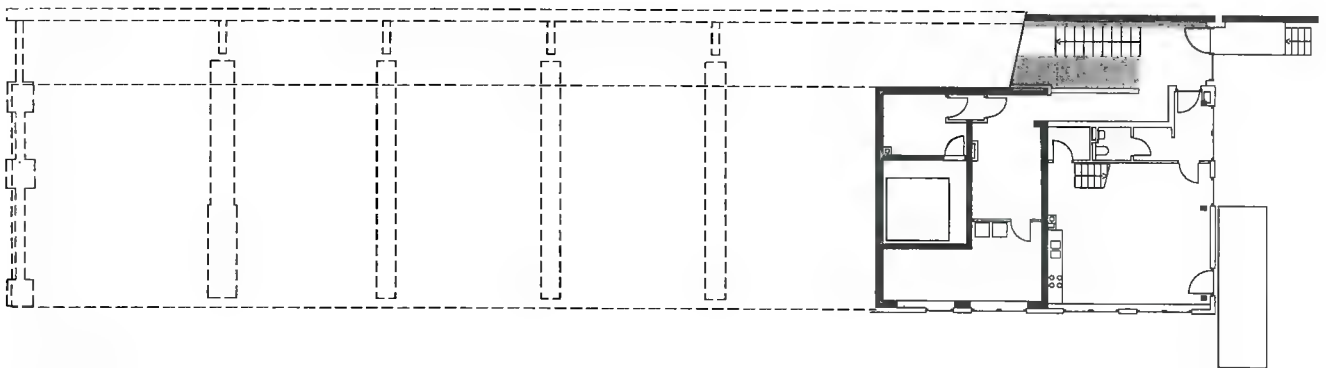




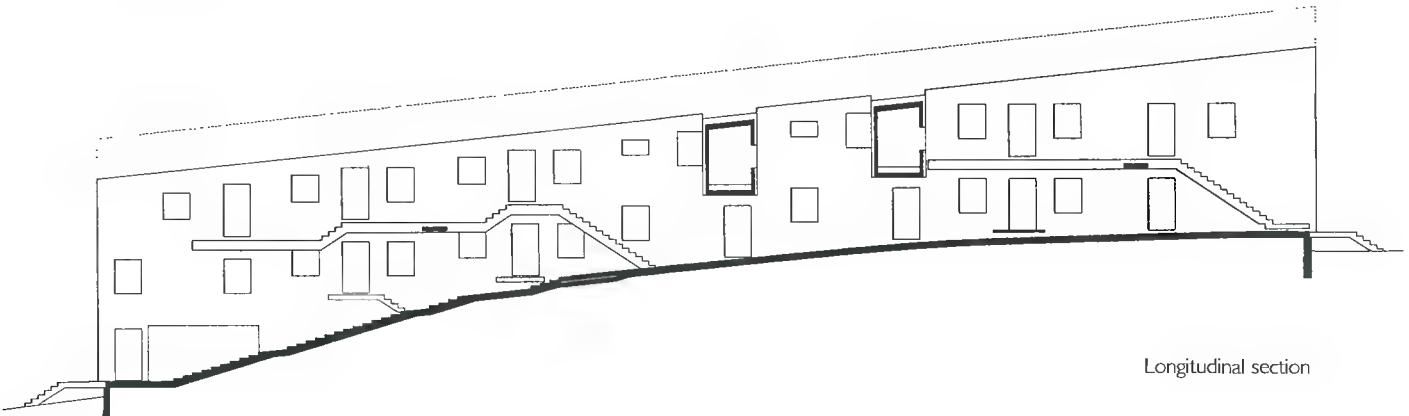
First floor plan



Access floor plan



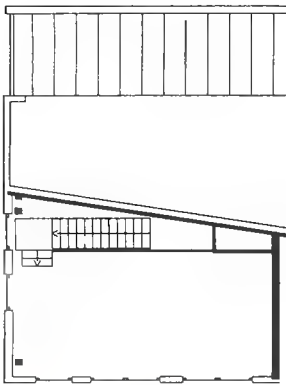
Basement plan



Longitudinal section



A three-metre wide circulation gallery is placed along the north facade. A series of openings-view-points perforates the concrete wall that closes the gallery.



Upper level floor plan





Cino Zucchi *House "D" / Ex-Junghans factory* *urban renewal*

Giudecca Island, Venice, Italy

The D building is a new construction which substitutes a utilitarian building on the corner between two canals on Giudecca Island in Venice. An existing brick chimney is integrated into the design as a testimonial to the industrial past. The cubical mass of the new building is excavated on the south side by a triangular court, an intimate space, which leads from the public path to the central core of the vertical distribution. On the ground floor, an extension of the volume on the right wing "embraces" the base of the chimney and guides the pedestrian paths which cross the area.

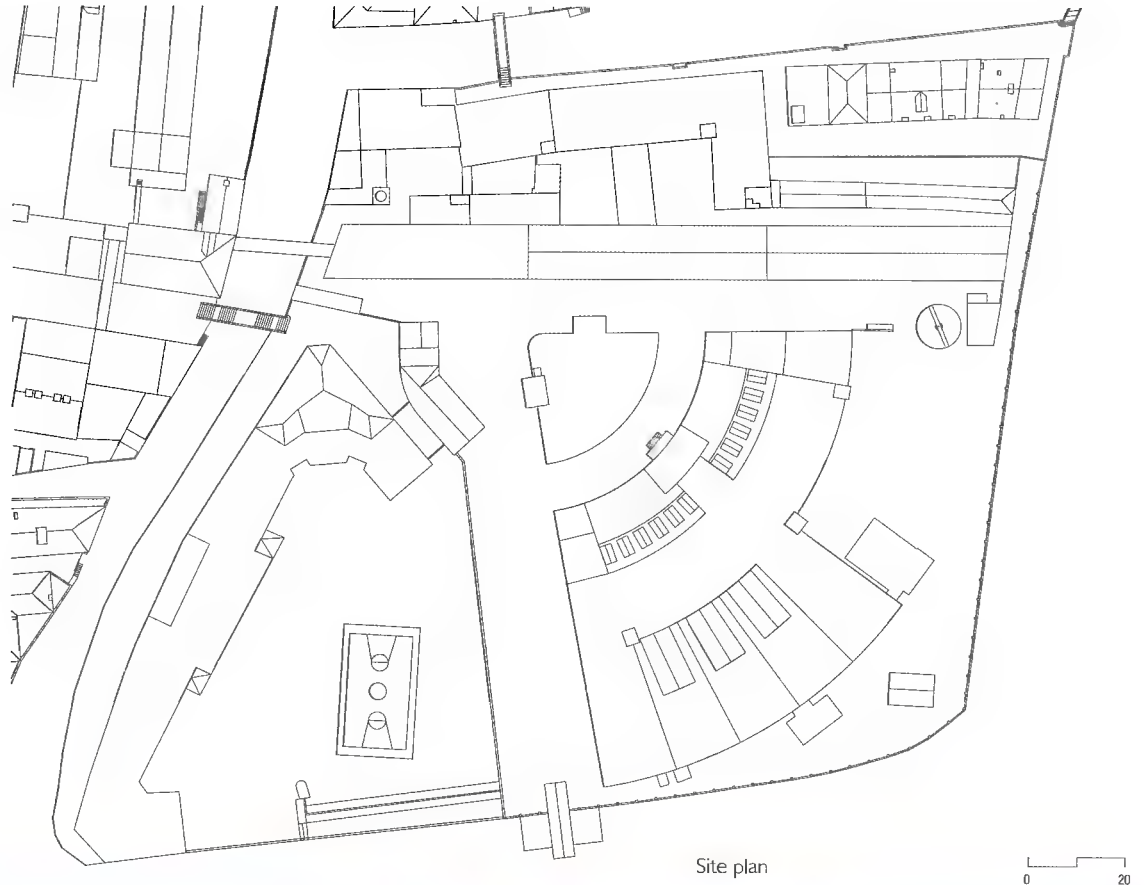
The building, on a foundation of steel-piles, is built in load-bearing masonry and reinforced concrete. Its four floors host sixteen subsidized housing apartments served by a central stair and elevator. The facades have only three kinds of window openings; their irregular disposition follows the varying floor plans of the apartments, and are arranged to maximize views toward the Redentore apse, the canals and the Laguna. But the result of the window pattern on the facades could also be read as a hyper-reactive reply to the contemporary need of "picturesqueness" which substituted the natural process of additions and modifications of the city over time. The traditional plain white stone window cornice of the historical Venetian architecture, here of different proportions, is transformed into a "graphic" motif which underlines the different depths of the window panes. The white-stuccoed courtyard reveals odd intersections with the eaves of the roof, generating an irregular silhouette, which suggests a less formal inner domestic life. Aside from its specific attributes, generated by the very constrained technical and economic reality of subsidized housing, the project attempts to establish a contemporary attitude toward our urban landscape, which treasures the spatial and formal innovations of the Modern Movement without getting trapped in its moralisms.

Photographs: Cino Zucchi

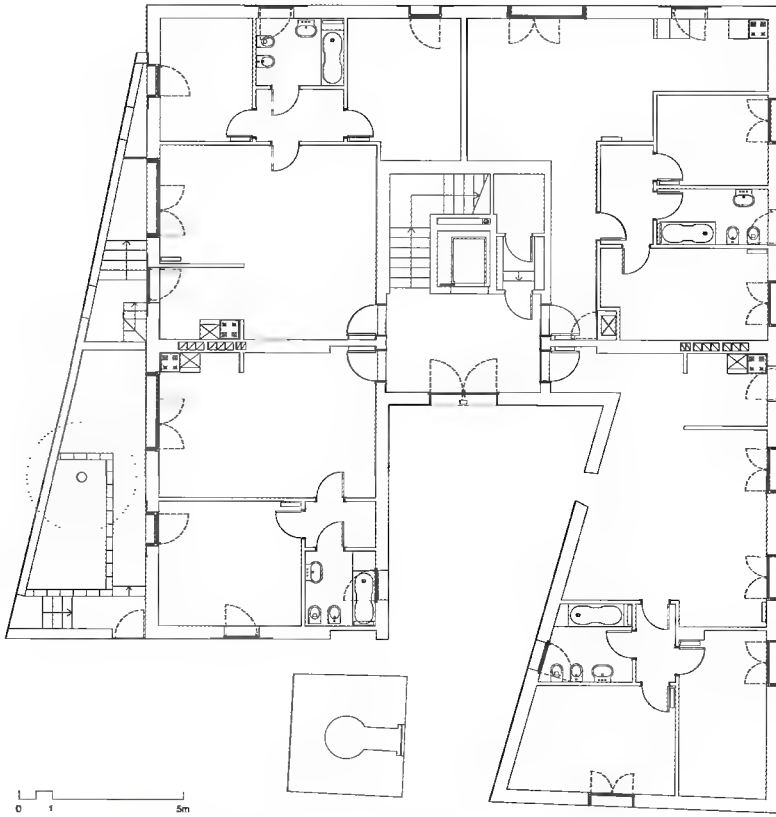




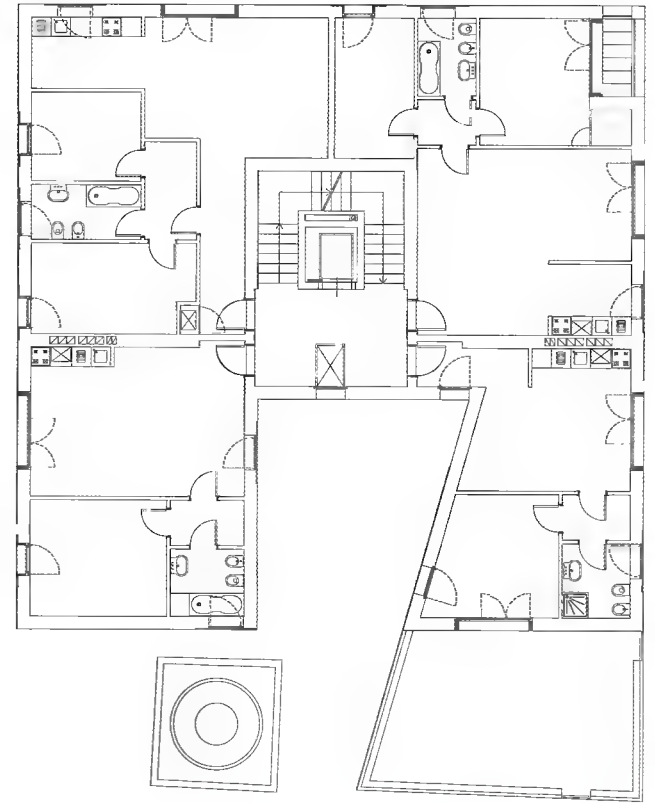
The roof is clad in copper; the facades are covered with natural grey sand plaster and left unpainted. The window sills and lintels and the base cladding are of white Istria stone. Window frames are of hemlock wood and the shutters are comprised of water-resistant plywood painted blue grey.





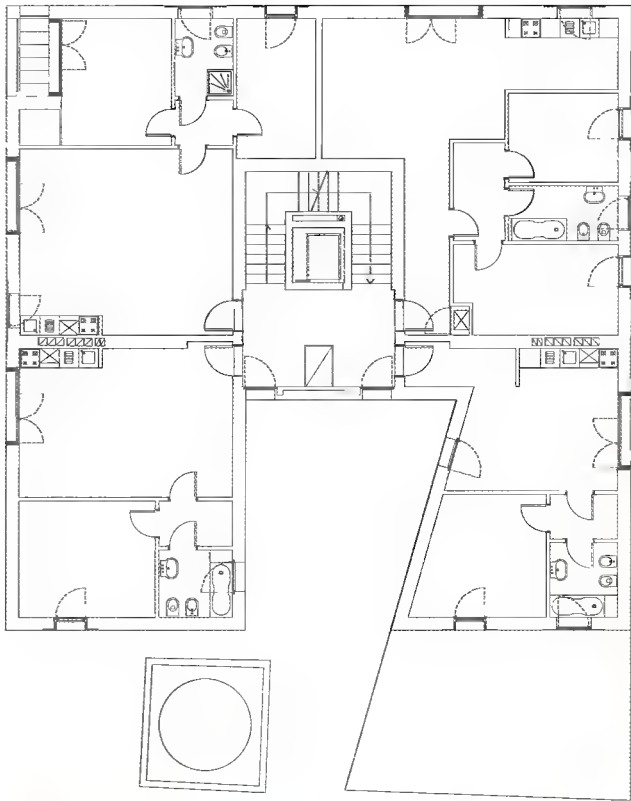


Ground floor plan



First floor plan



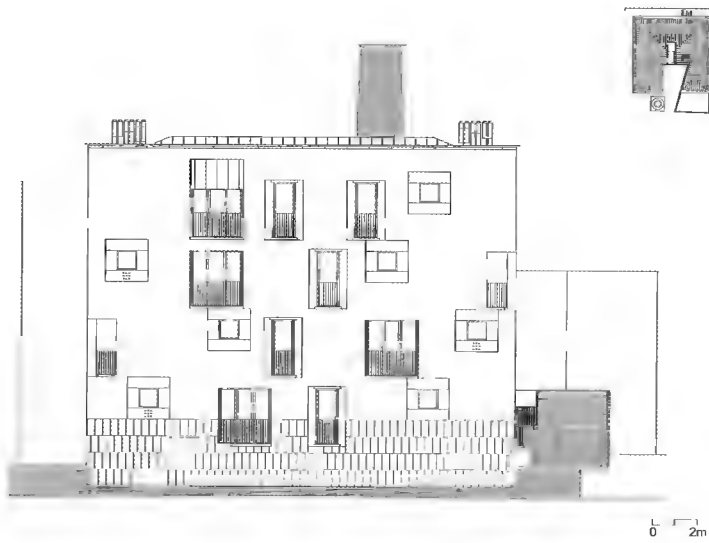


Second floor plan





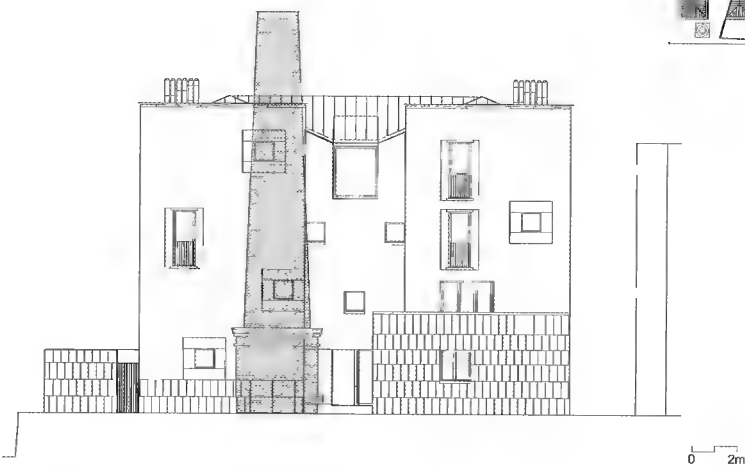




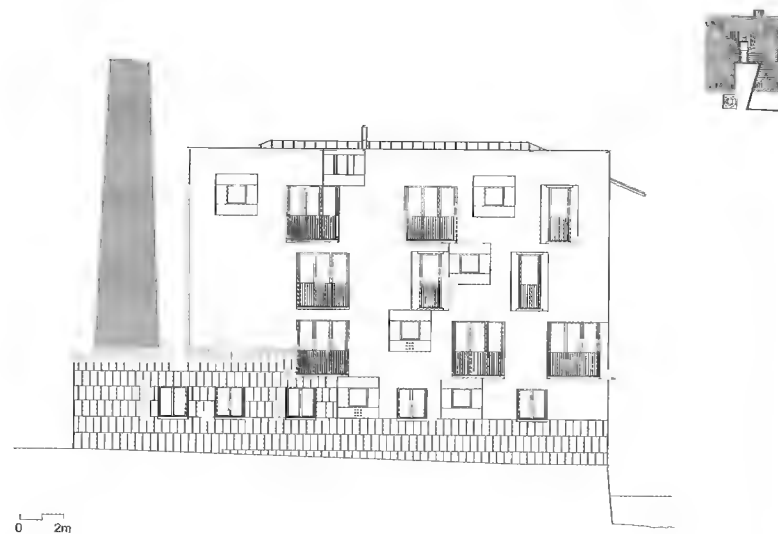
North elevation



West elevation

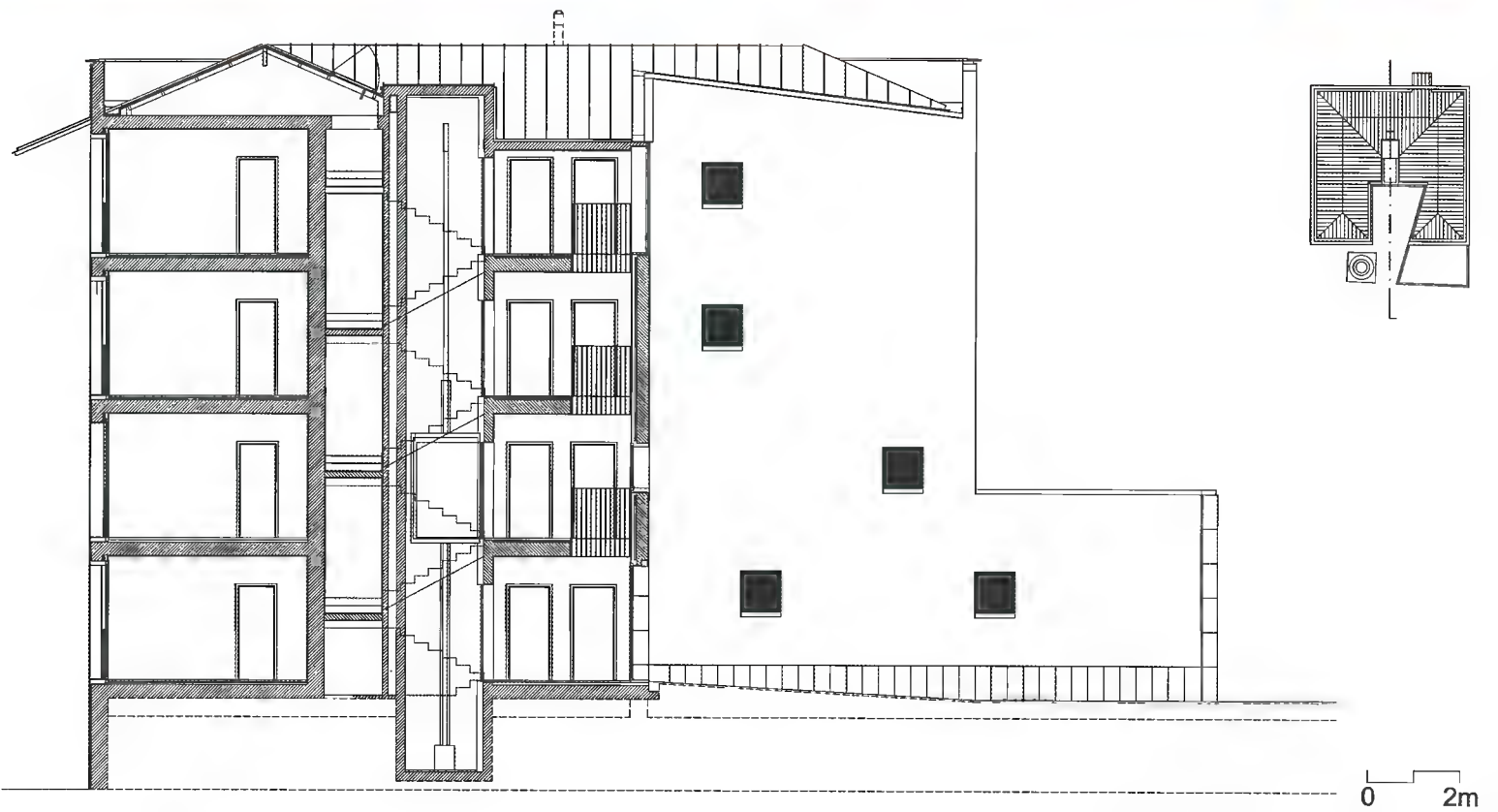


South elevation

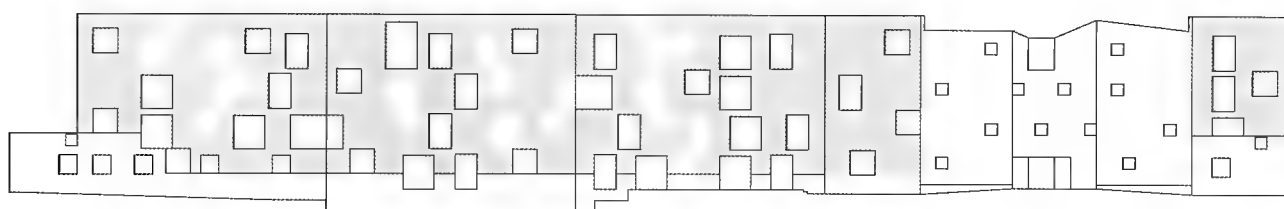


East elevation



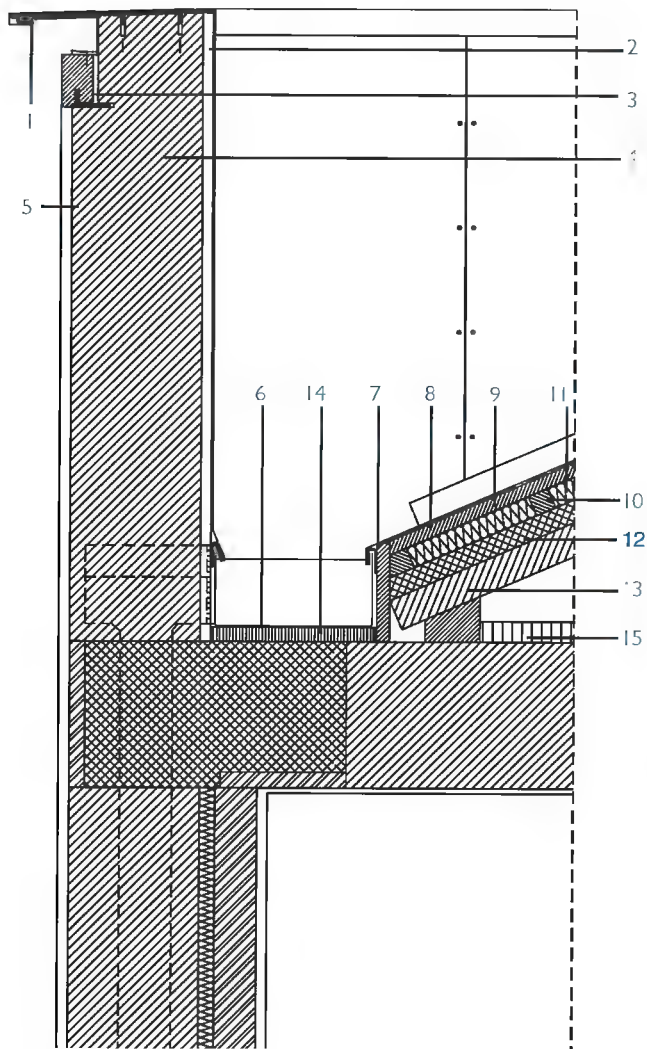


Cross section

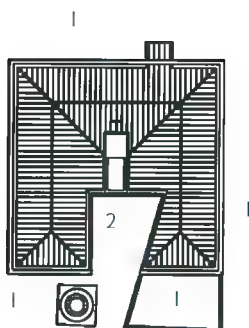


Schemes

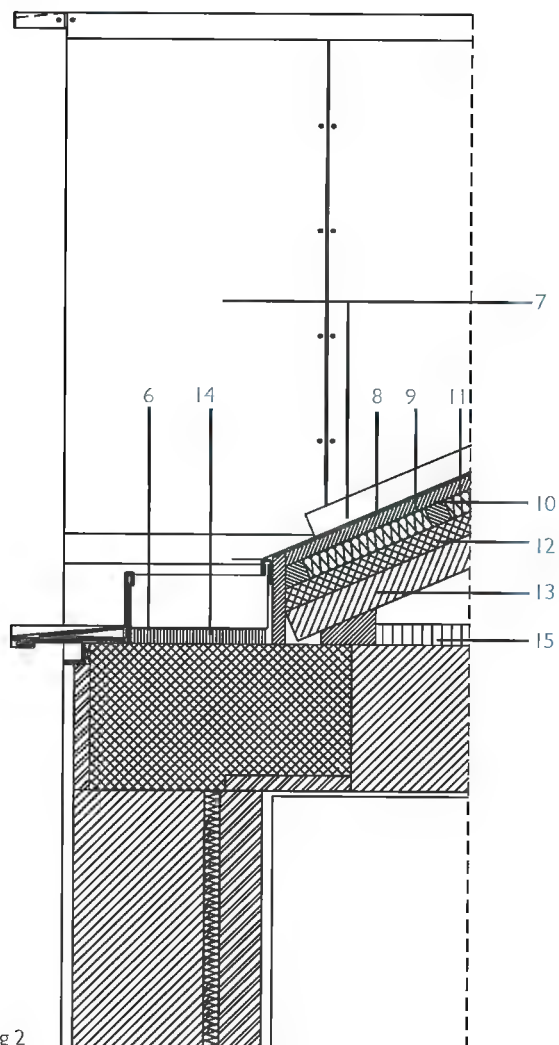




Detail of capping 1



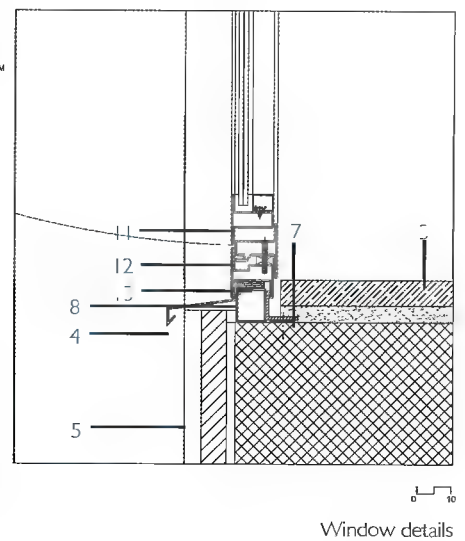
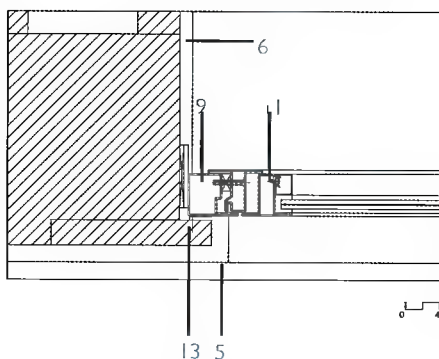
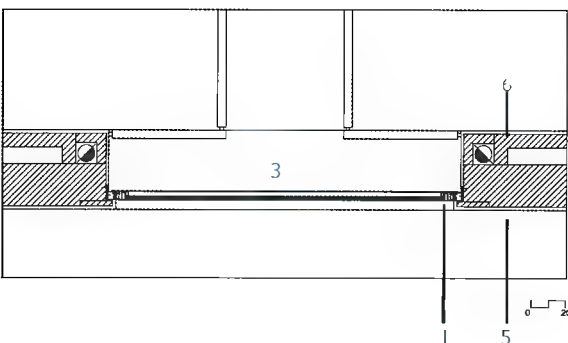
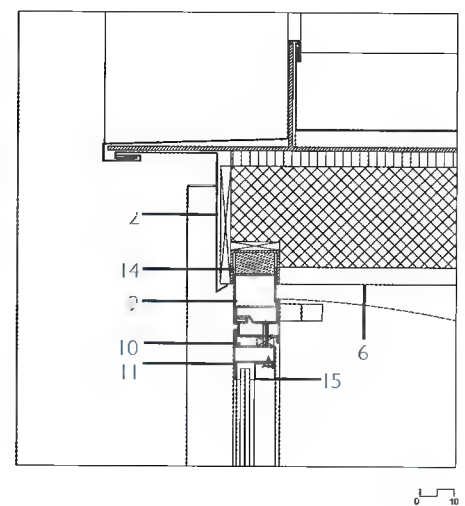
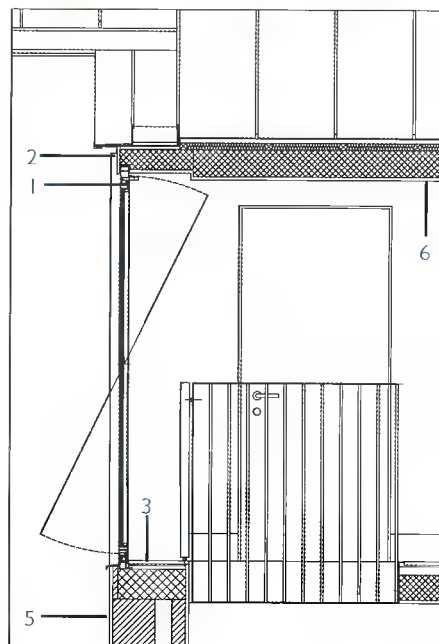
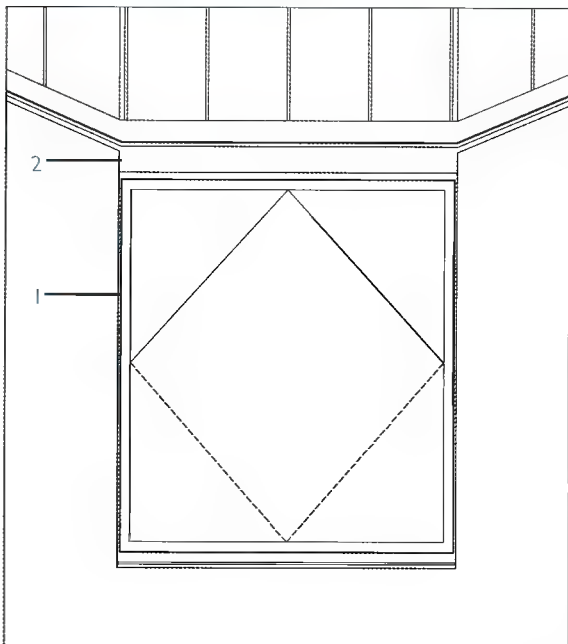
1. 5 mm stainless steel
2. Copper plate cladding
3. Trani stone finish
4. Air brick wall
5. Grey lime finish
6. Copper gutter
7. Copper plate cladding
8. Layer of roll roofing
9. Wood planks
10. 4x4x40cm fir strips
11. Macrocellular polyurethane insulation
12. Ferrocement with electric-welded mesh
13. 6cm ceramic pieces
14. Bedding with .5% slope
15. Bedding lightened with 4cm expanded clay



Detail of capping 2



1. Enclosure in zinc treated steel
2. Protective layer of natural copper
3. Inner threshold of 2cm-thick Tranilevigata stone
4. Protective layer of stainless steel
5. White exterior marmorino plaster
6. Colored interior marmorino plaster
7. L 35/35 profile
8. 40/35/2 profile
9. 01.565 profile
10. 30.600 profile
11. 02.535 profile
12. 32.356 profile
13. Sealing ring
14. 40/60/3 U Profile



Window details

Baumschlager & Eberle *Wohnen am Lohbach*

Innsbruck, Austria

This social housing development built on the border between the residential and agricultural areas of the west of Innsbruck has won two important prizes in the 2001 World Architecture Awards - Best Residential Building and Best "Green" Building. The project is made up of six blocks of five to seven storeys and includes 298 apartments. The blocks can be accessed by well lit, tree-lined paved paths which are free from car traffic, and many of the public areas have been especially designed by artists. The stairways that provide access to the apartments are covered and enjoy top-lighting. All the apartments have full-height French windows providing access to the terraces and balconies that run around the buildings. Copper shutters and satinated glass parapets have been installed as weather protection on the terraces and balconies and to provide privacy.

This project incorporated innovative cost and energy saving features. The use of computer software systems in the design saved on costs, which permitted funds to be spent on high-quality materials, which are not usually found on social housing projects. Every apartment has a heat-recovery unit, a controlled ventilation system, high levels of insulation, and solar energy collectors, which supply most of the power for hot water. These features have lowered space heating and domestic hot water costs by 70 percent as compared to conventional dwellings of the same size.

Photographs: Eduard Hueber





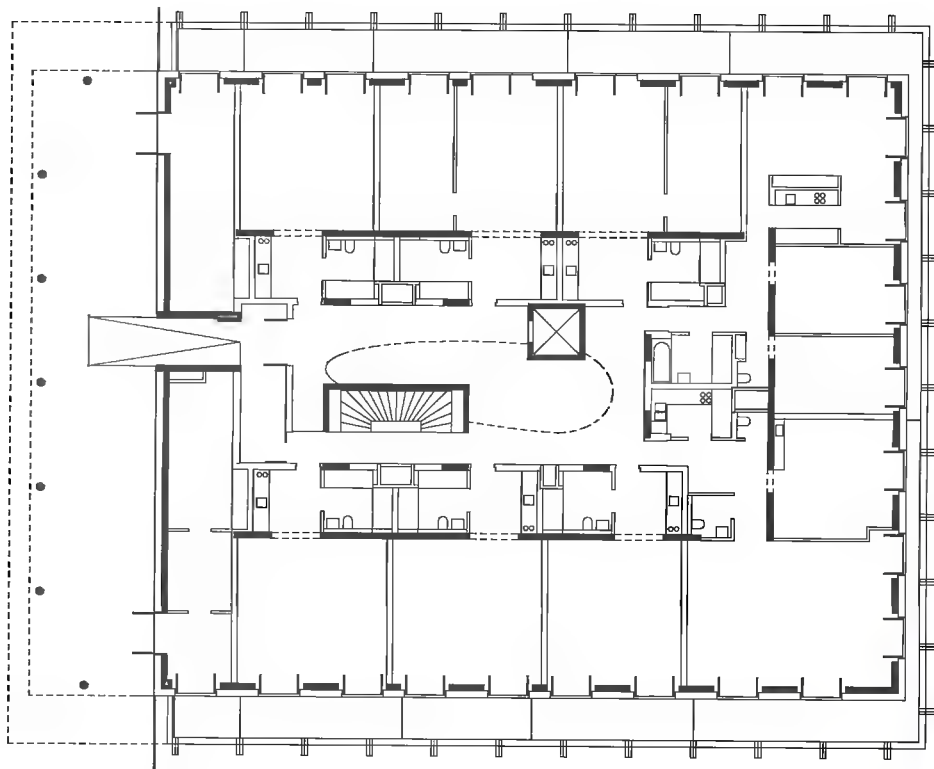
Site plan



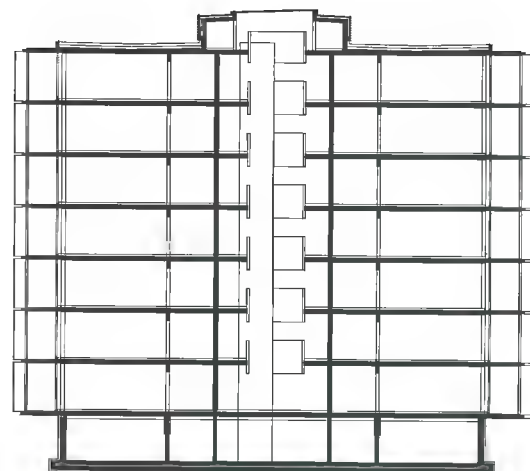
The use of computer software systems in the design saved on costs, which have instead been spent on high-quality materials -such as stone floors, copper shutters and wooden window frames- which are not usually found on social housing projects.



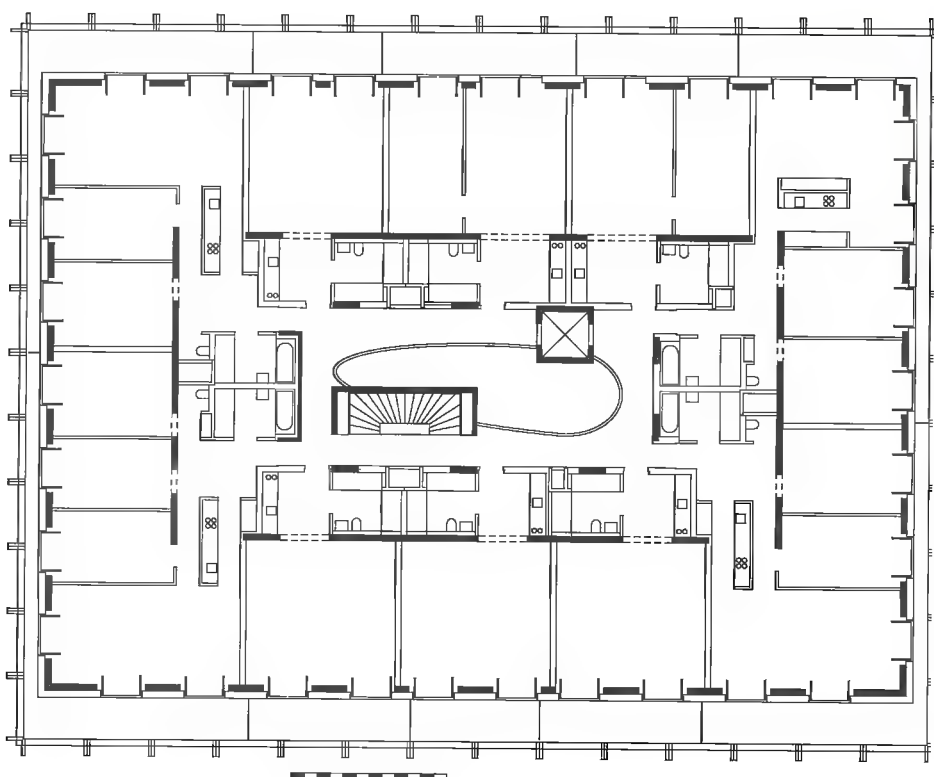




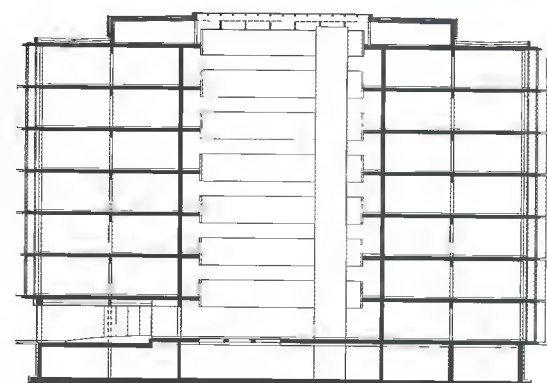
Ground floor plan



Cross section



Type floor plan



Longitudinal section



de Architekten Cie.
Frits van Dongen
the Whale

Amsterdam, The Netherlands

The Whale, a housing and shopping complex, is located on Borneo Sporenburg, a former harbor area along the shores of the IJ, near Amsterdam's inner city.

The elegant raised form conceals the enormous program: 214 apartments with business areas underneath and an underground parking garage on a plot as large as a football field.

The points of departure for the design of the Whale were an optimum amount of sunlight as well as views for all the houses. The solution was reached by raising the building on two of its sides so that a diagonal kink was produced in the middle, thus allowing the lower floors to receive sunlight under the actual building. The line of the roof varies in height according to the position of the sun in the sky. Therefore, light has free access into the heart of the building. The result is a redefinition of the closed block: the inner area transforms the traditionally private domain into an almost public city garden.

The Whale's deviating shape, with its many slanting lines, generates an enormous diversity of housing types, with exceptional apartments being located in the lower and upper strips of the building in particular. The diagonal lines are reproduced in the interior of the building in a staggered pattern of galleries. These offer access both to the houses on the same level and to those of the floor above, so that an additional variation in the form of the lower/upper apartments can be obtained. Each of the raised corners is supported by a glass stairway with an elevator.

The Whale emphasizes transparency as opposed to the seclusion of the traditional block. The raised block seems to float, engenders openness in all directions and allows generous views of the island and its surroundings.

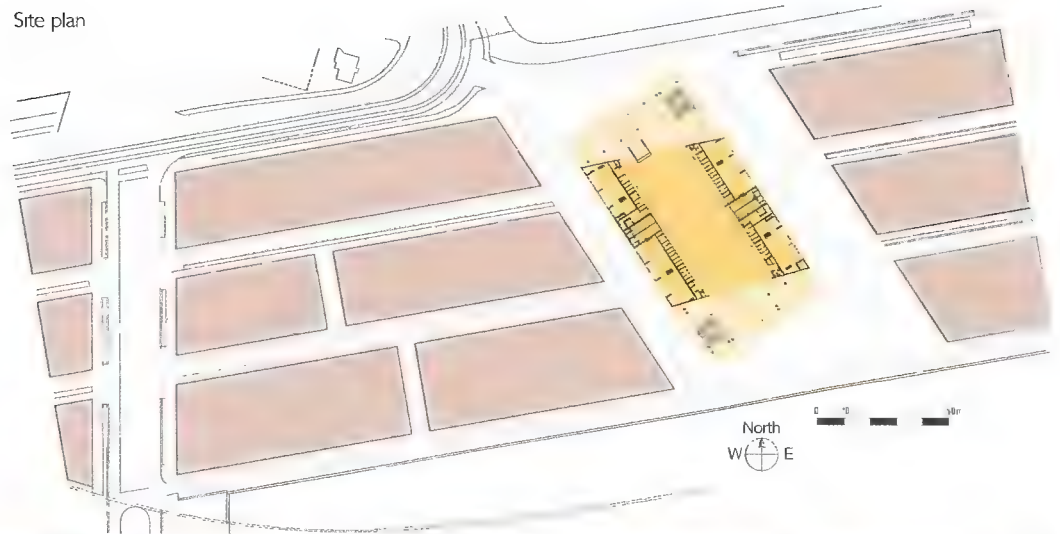
Photographs: Jeroen Musch



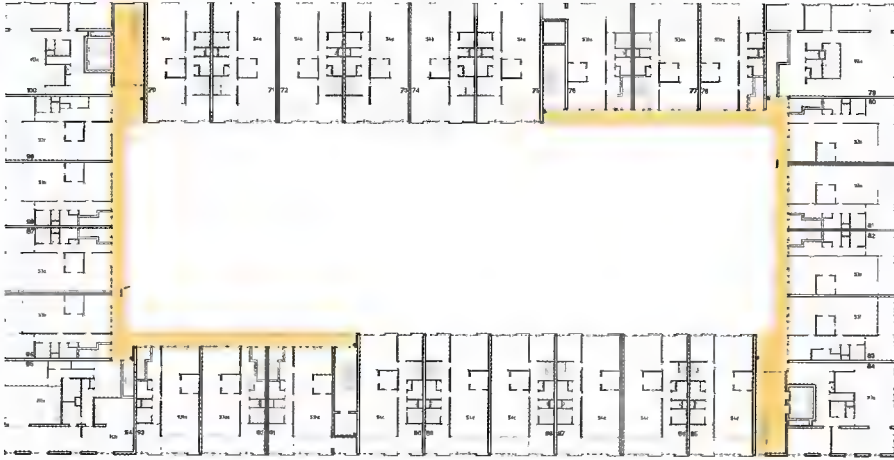


The taut lines of the building are continued in the aluminum roof and zinc frontage material, in which depth is created by the tactility of the façade: a slightly scaly skin of zinc plates with windows equipped with wrought-iron trellis work and wooden Amsterdam railings.

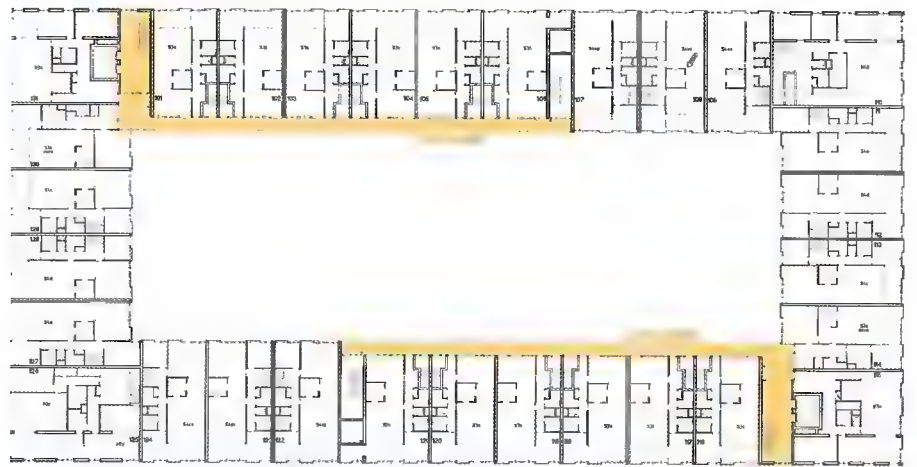
Site plan







Fourth floor plan



Fifth floor plan







Cross section

0 10 20m



In the interior, the Whale exudes an atmosphere of intimacy. The wooden finishing ensures a warm ambience and also absorbs noise, as does the garden outside. At night, the contours of the building remain visible due to the special illumination on the roofs of the raised extremities.







Toshio Akimoto *Yakult Dormitory*

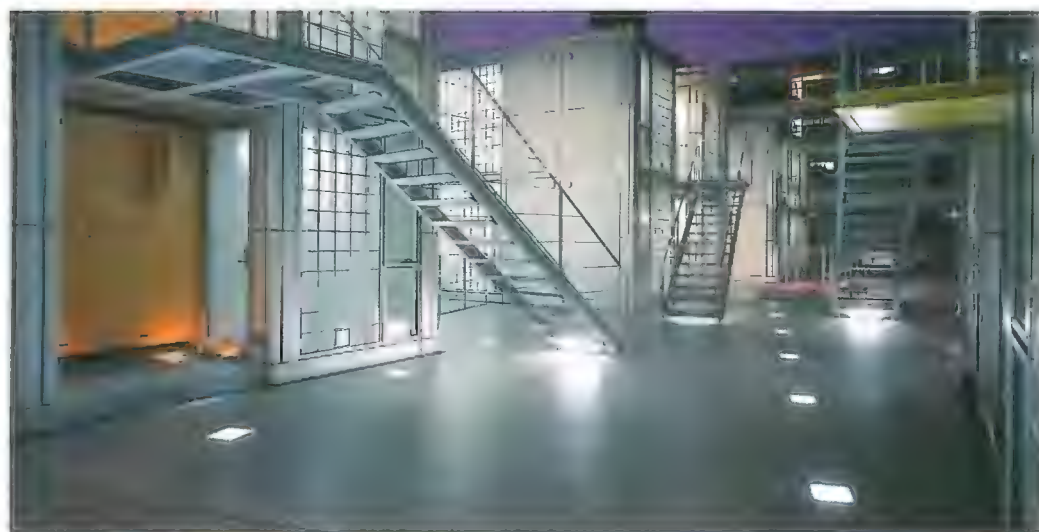
Tokyo, Japan

This project is the result of a contest put out by the Yakult Corporation for the design of small apartments for their employees. The complex breaks down into eight volumes containing the small residential units, which rise from a concrete foundation and form a striking silhouette against the fragmented urban landscape of Hachioji in Tokyo.

The functional layout has been achieved with great simplicity. The apartments occupy the upper levels, contained within eight cubes of six metres a side, faced on the outside with a combination of pavisade and aluminium plate. And the general facilities -kitchen, laundry, office-, the manager's rooms and small bedrooms for guests are located on the ground floor, shared out between two buildings attached on the longer side of the rectangle. Between them a third free strip is partially occupied by a unit -also rectangular- which circles round to link the two buildings. The roof of this unit, which is glass-walled on the ground level and houses a common sitting area and the entrance hall, is an area linking six of the eight residential modules to each other on the upper level and also provides access to them. Four apartments are located in each -two on each floor- all functioning as totally private houses thanks to their independent entrances.

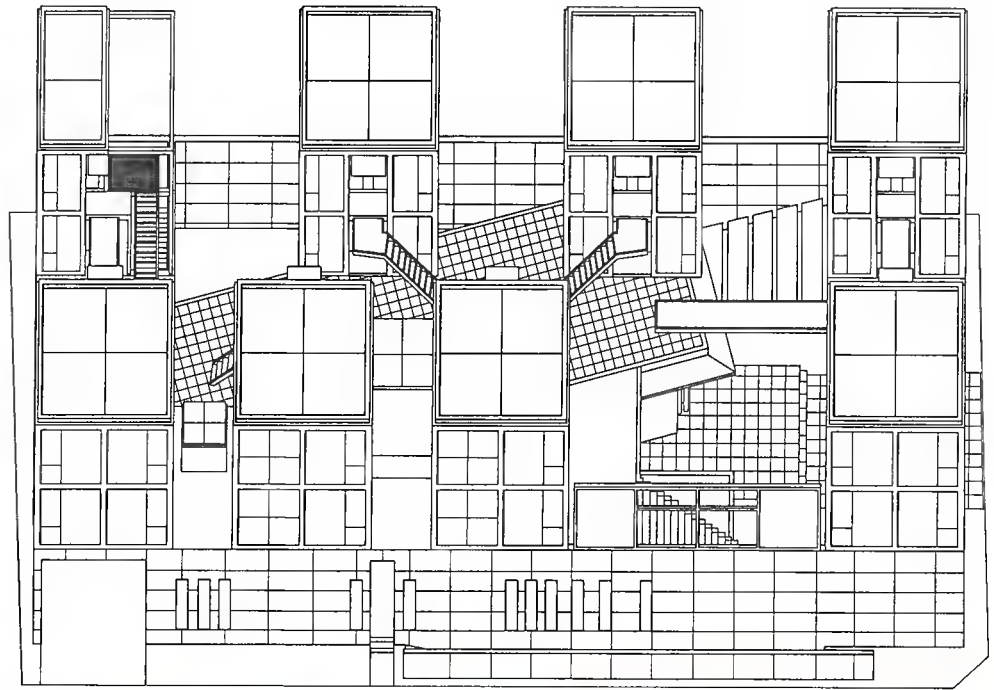
Thus, the project has a two-fold nature. On the upper floor the unit has a domesticated air, noticeably different from conventional community residential architecture. And on the lower floor one sees an area dominated by the corner of the hall which receives visitors and the view of the small bridge which leads off to the apartments situated at the north-west end, evoking in some way the complexity of the traditional urban environment.

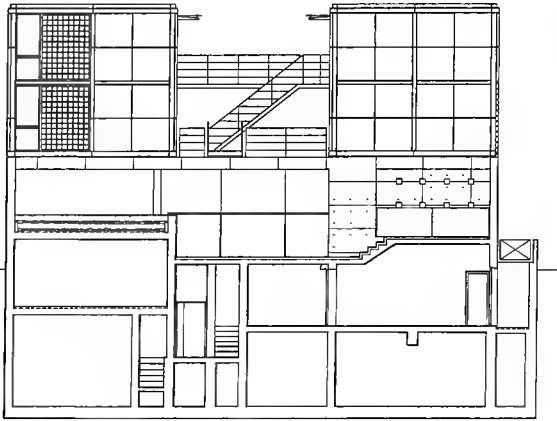
Photographs: Eiji Yonekura





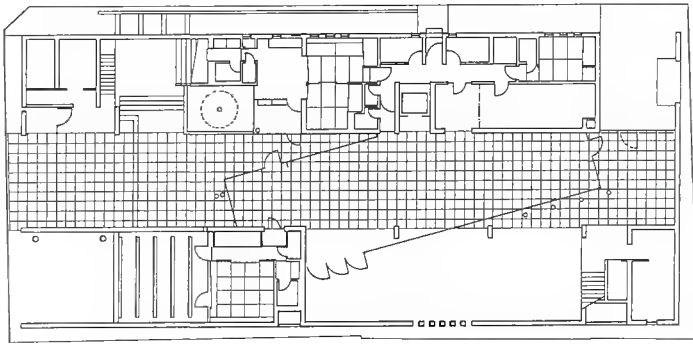
The project is structured simply by means of eight six-metre cubes that were placed on the site. Each cube, built with aluminium, glass brick, blocks and reinforced concrete walls, houses four residential units. To the left, an aerial view of the complex from the north-west side.



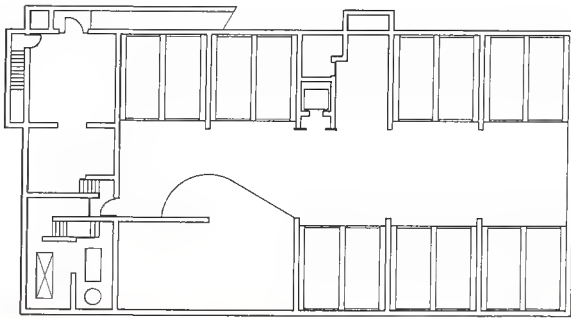


The ground floor was conceived as a space with an urban character. It houses the general facilities such as the kitchen, laundry, a small guest room and other community rooms.





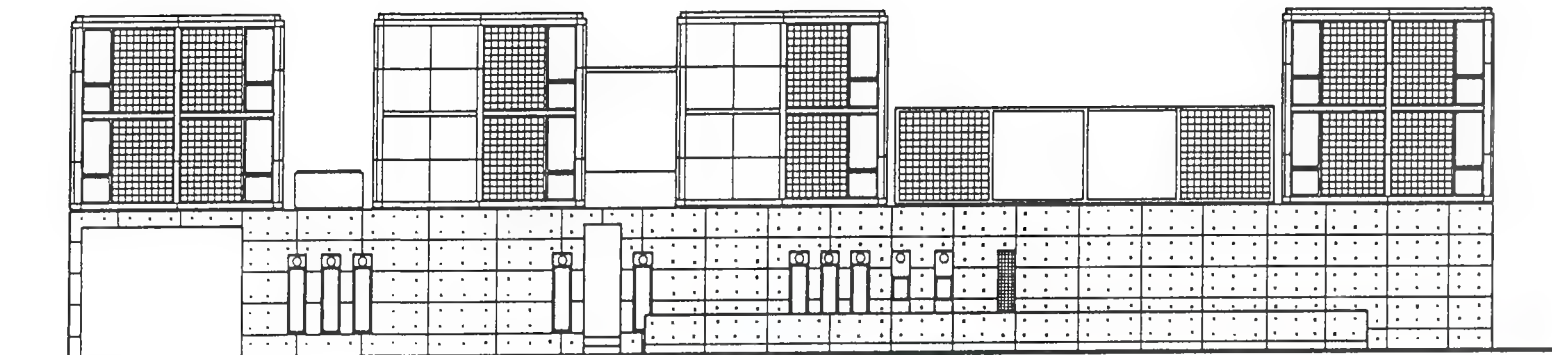
First floor plan



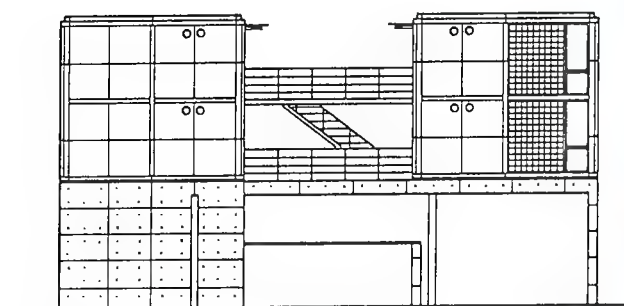
Basement floor plan





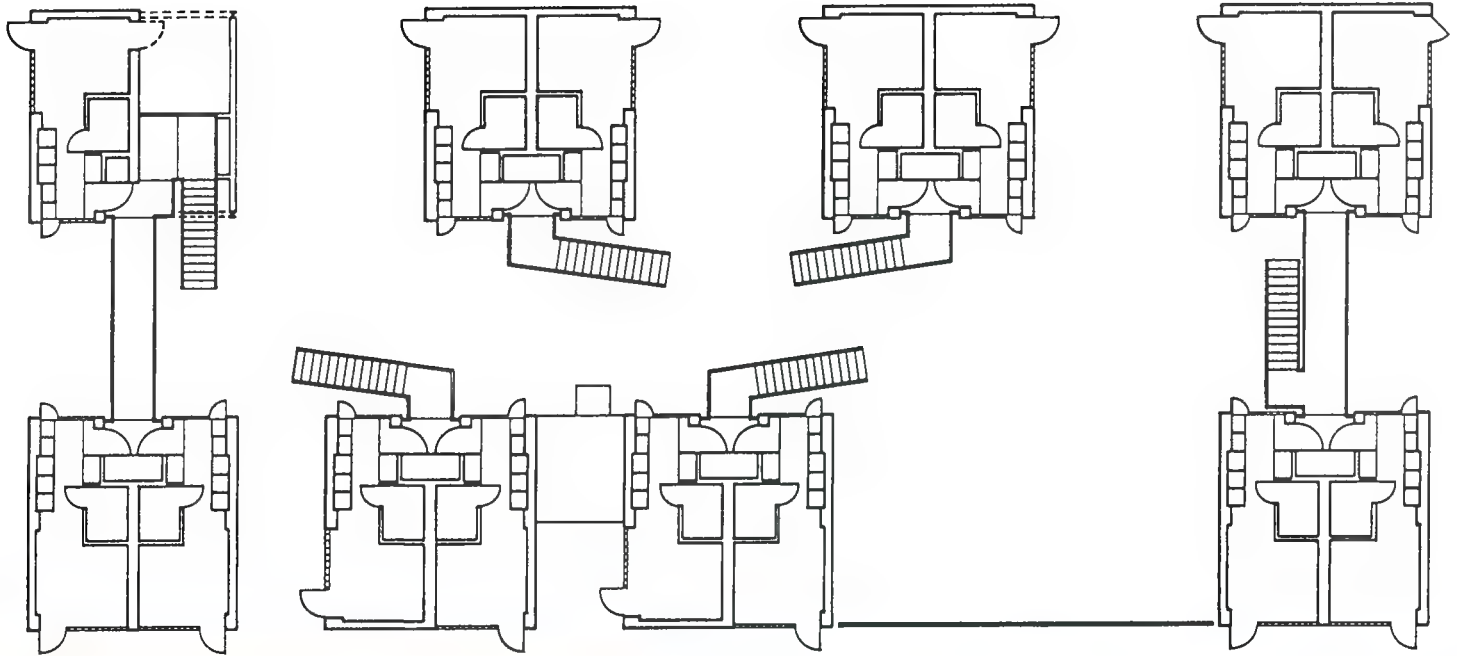


North elevation



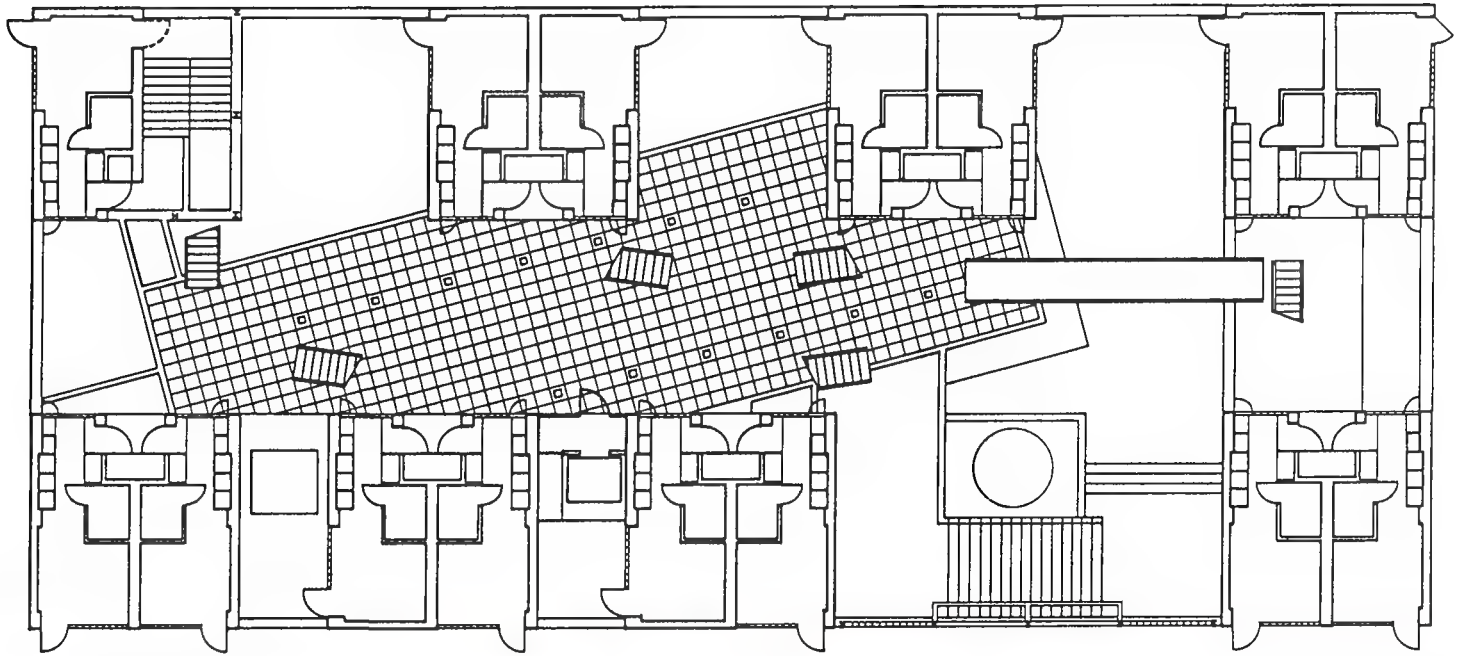
East elevation





Third floor plan





Second floor plan



Architecture Studio *University Residence*

Paris, France

Framing what one wishes to see, shielding from what one does not want to suffer, inverting the bad into good, altering the negative constraints of the site to create a positive reality: that was the challenge facing this 351-student housing project built right on the edge of the peripheral zone of Porte de Clignancourt.

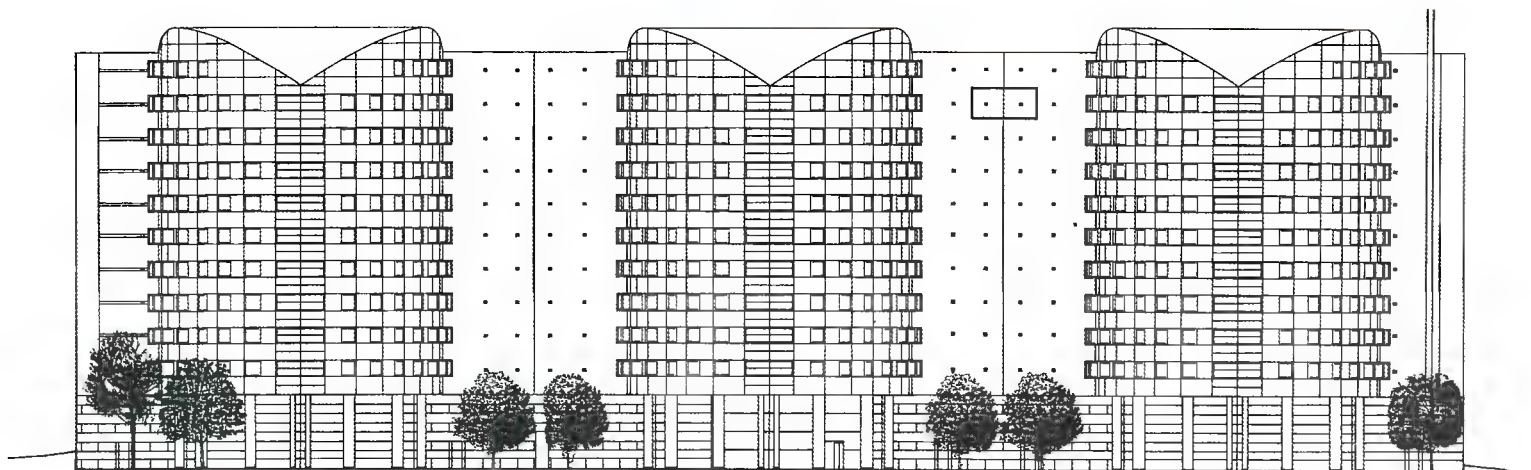
On the roadside there is a protective wall, a curved shield 30 by 100 metres, a giant screen, an enigmatic signal built into the kinetic landscape of the city as seen from the car.

The shield is a double space, inserted between two walls that are structured by red steel ties and through which three glazed lifts evolve. It is a Parisian promenade looking out towards the moving cars. The protecting wall is pierced at its centre by a large window that frames the suburban horizon towards the Saint-Denis basilica. At night, this black concrete wall reflects the hues of the multicoloured advertising neons and car headlights. The plate glass allows the building's interior light to filter outwards. Red beacons punctuate the isolated mass of this shield-rock.

On the Paris side, a green belt, tranquility, sun. Backing onto the shield, three curved buildings faced in aluminium. All the apartments are well sheltered within these three prows. The interior routes are set off by various spaces differing from the monumental entrance hall and the shield in order to give privacy to the apartments. The access to the latter is by double height landings. These are cut through by several plaster columns inset at intervals with round glass bricks, wells of natural light brought down to each landing from the roof. These light wells are a fixed point common to every floor. They look towards the sky from the heart of the building.

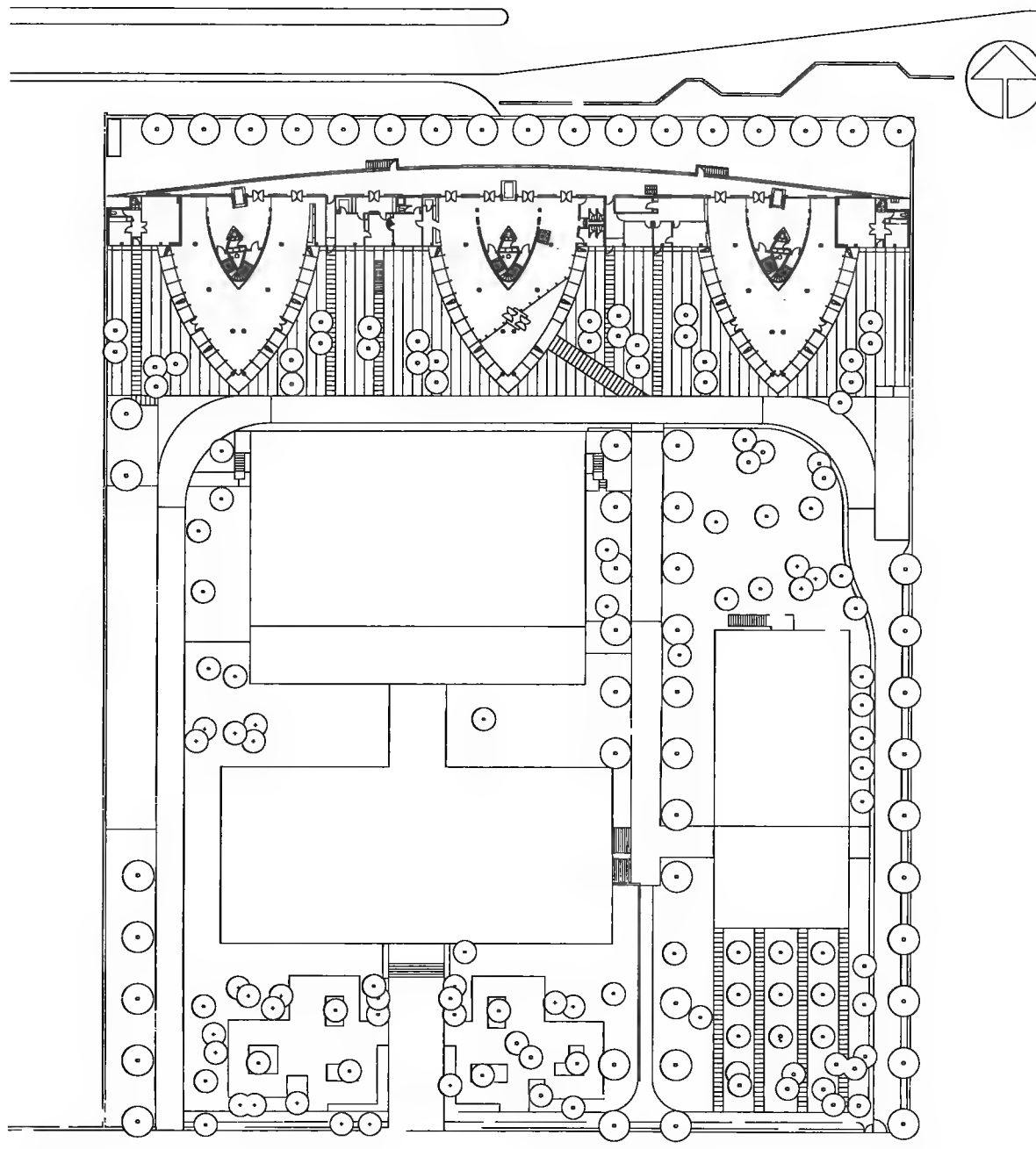
Thanks to the almond-shaped plan and splayed bay windows, every apartment is south-facing, with views towards the adjacent university gardens and the silhouette of Montmartre and the Sacré-Coeur.

Photographs: Patrick Toumeboeuf

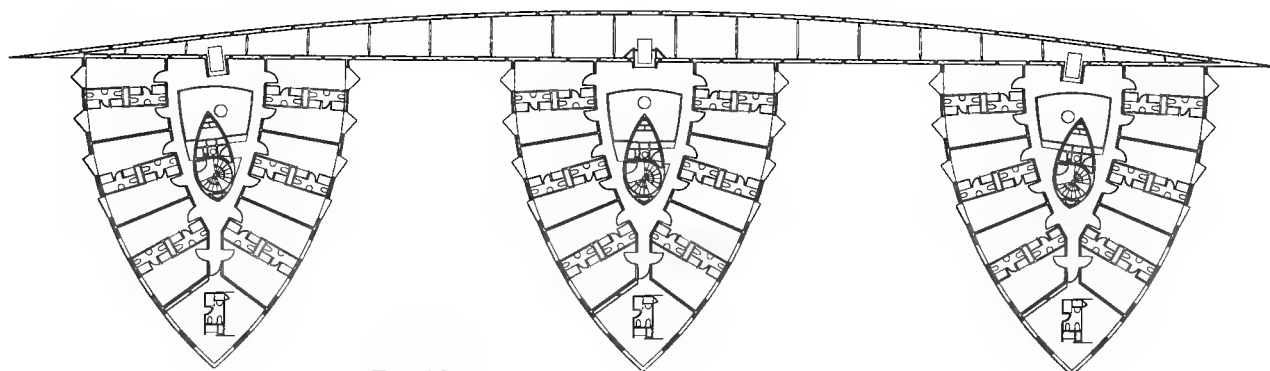




The university residence building rises audaciously in a clearly urban setting surrounded by traffic and noise on one side and by a green belt of peace on the other.

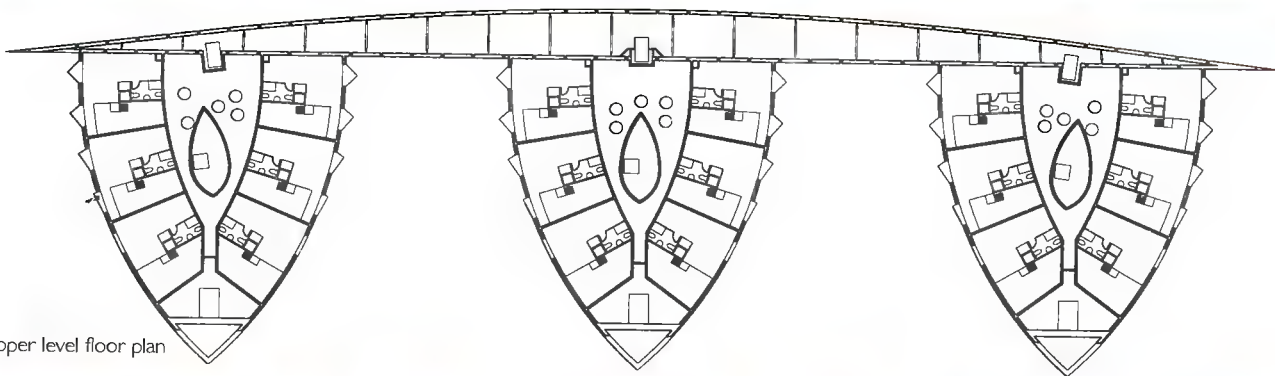
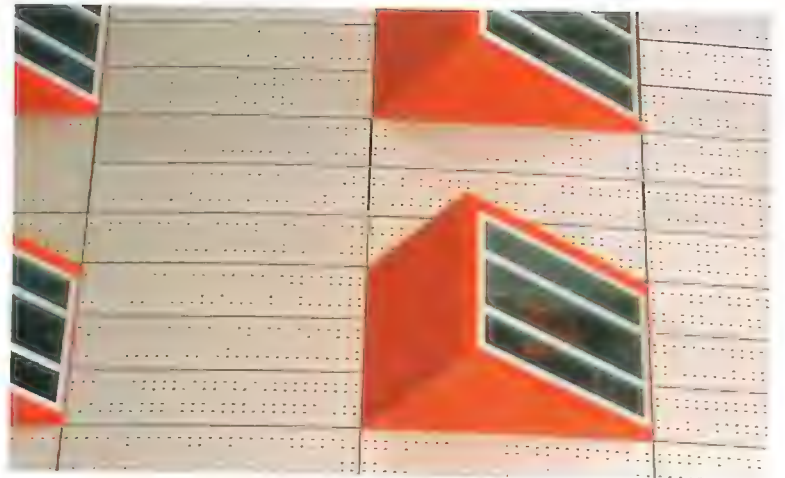


Ground floor plan

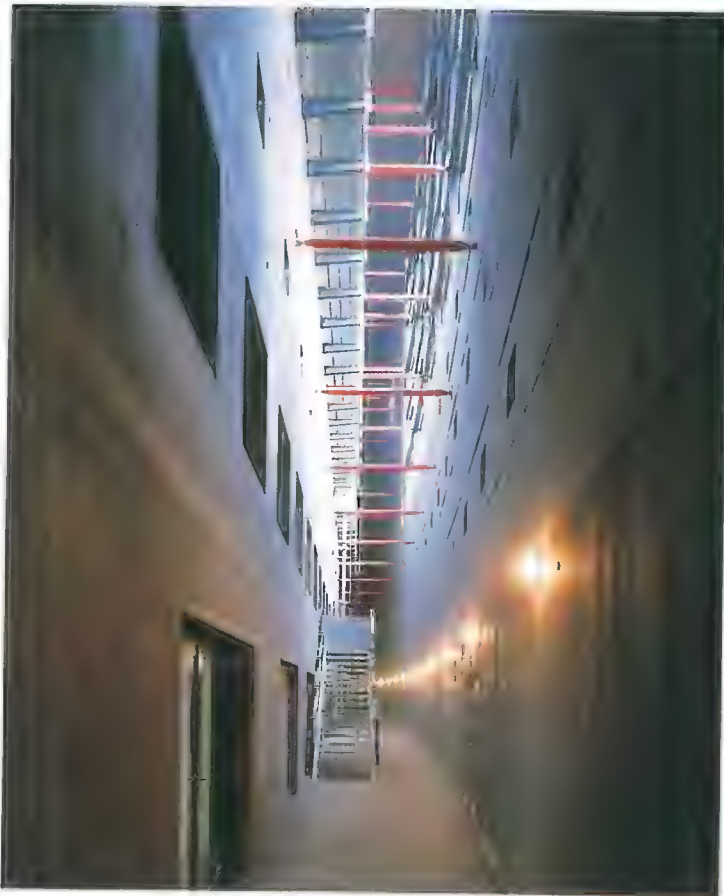


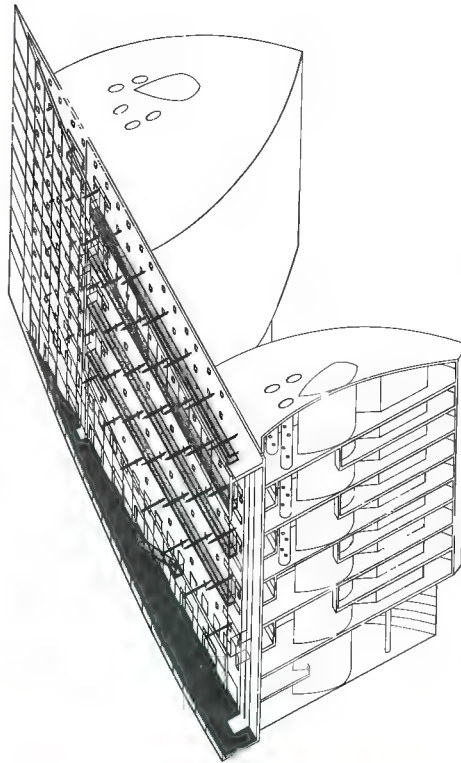
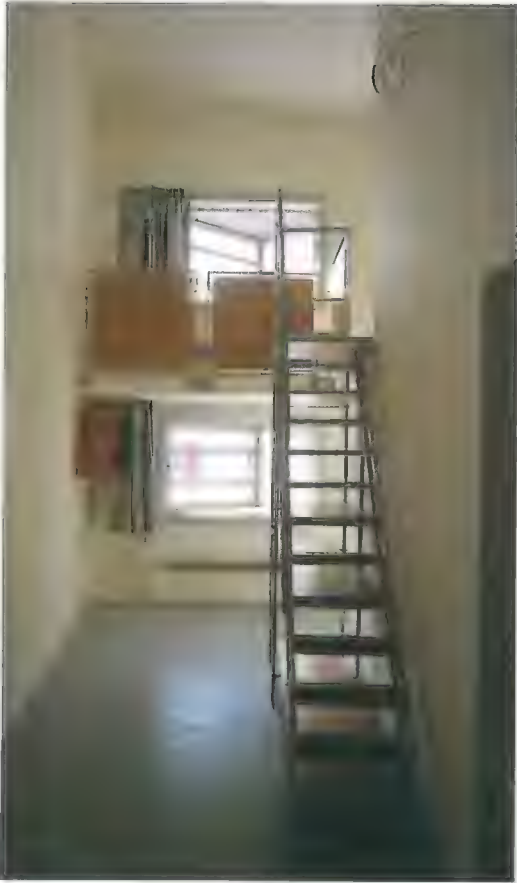
Typical floor plan





Upper level floor plan





The access to some of the apartments is made through a double height landing. The interior routes are punctuated with plastered columns, glass blocks and points of natural light. In order to preserve privacy, the interior routes of the buildings are further cut by different spaces, in contrast with the exterior homogeneity.



SWECO FFNS Arkitekter
AB & Moore Ruble Yudell
Architects & Planners

Bo01 Tango Building

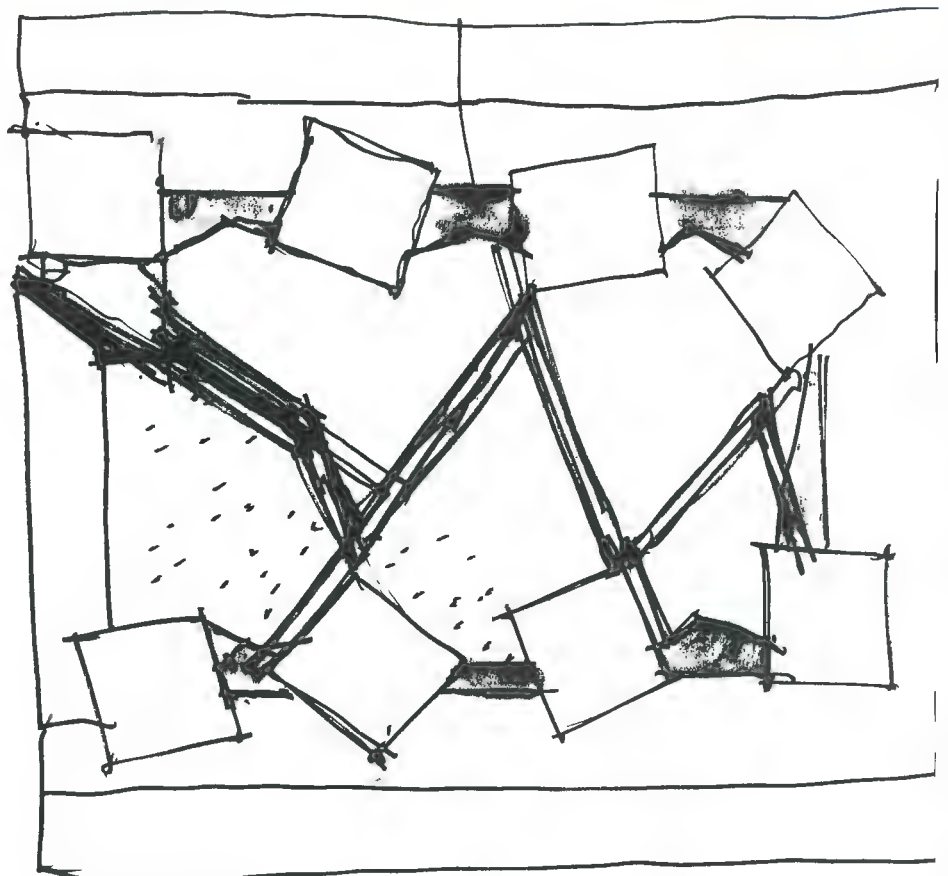
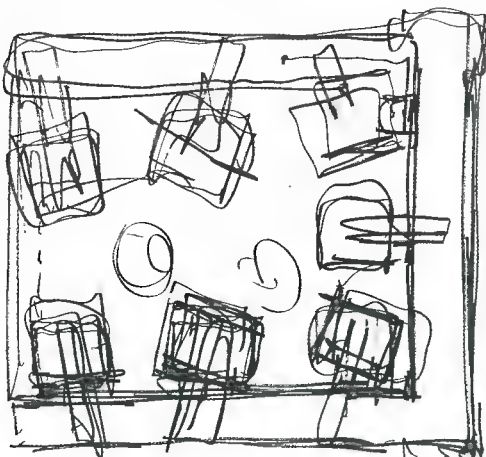
Malmö, Sweden

The design concept for this building stemmed from two ideas. First, along the exterior perimeter, the plan was to relate the block to the surrounding urban fabric. The elevations appear simple, yet sophisticated, in the surprising reading of the vertical stone and window elements and the facades are enlivened by an engaging sense of vitality, variety and movement. The windows and wall surfaces have been arranged in a syncopated pattern similar to a chess board, reflecting the flexible configurations of the dwelling units from floor to floor. This flexibility in the unit floor plans was an important concern.

Second, on the more playful and vibrant interior of the block, the idea was to open the units to the landscaped garden facing west. Therefore, the living rooms of the individual units are projected into the garden as glass towers in order to make the living units seem bigger. Dancing around the edge of the garden, the glass pieces also carry solar panels on top, while stone "fingers" on the garden wall reinforce a horizontal reading that contrasts with the verticals on the exterior. The structure steps from two to four floors to accommodate the 30 rental units.

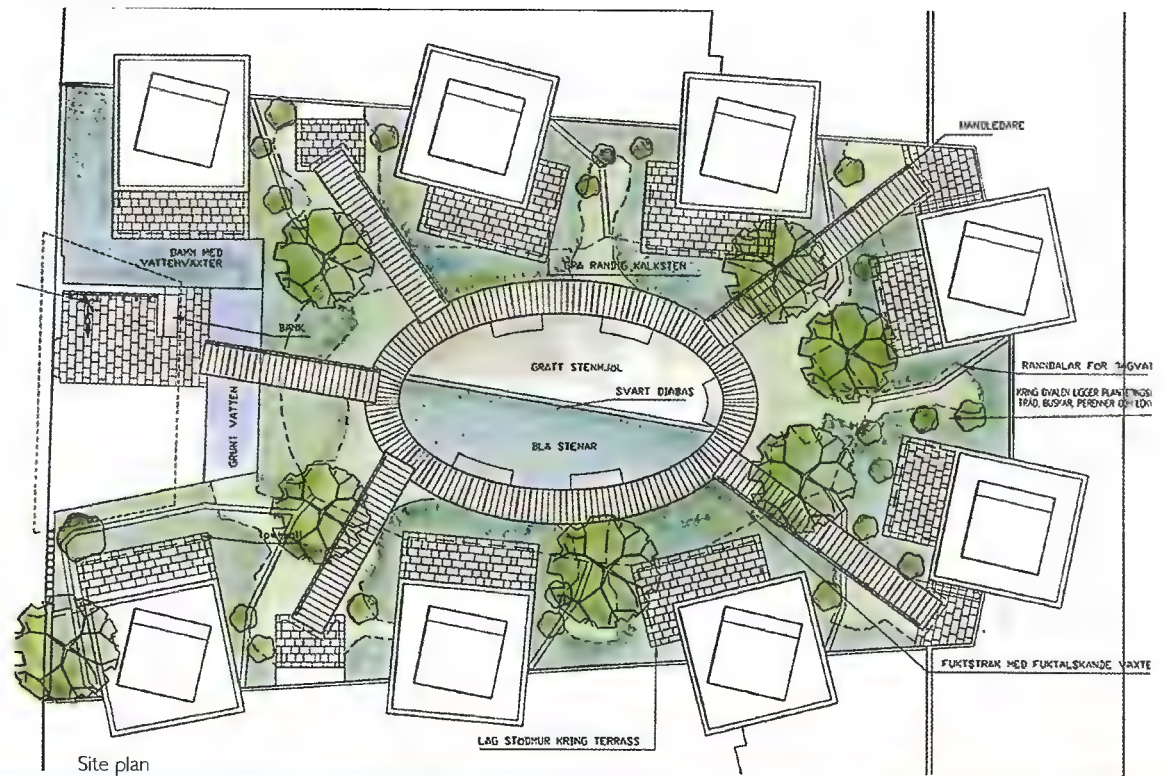
Internally, the units are configured with a uniform yet flexible "technological wall" which continues toward the exterior walls of the block. A more open and fanciful arrangement occurs in the living areas contained in the glass towers projecting into the courtyard. The entire wall of the glass towers opens to the garden, allowing the units to flow into the landscaping. In the evening, when their screens of wood lattice are lit from behind, the glass towers glow like a series of Chinese lanterns in the garden. Oriented toward the west, this important outdoor social space is shaped as an oval "island", where residents can gather, especially in the summertime.

Photographs: Werner Huthmacher

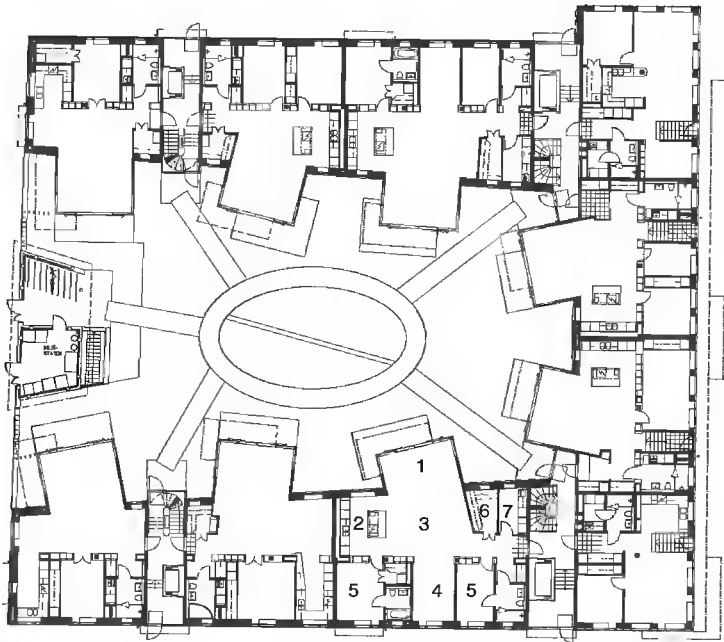




Located in Malmö on the southern tip of Sweden, opposite Copenhagen, this city block of 30 housing units is part of a larger urban development plan, which includes 1000 dwellings, along with workplaces, restaurants, cafes, day-care centers, a school, and a library.

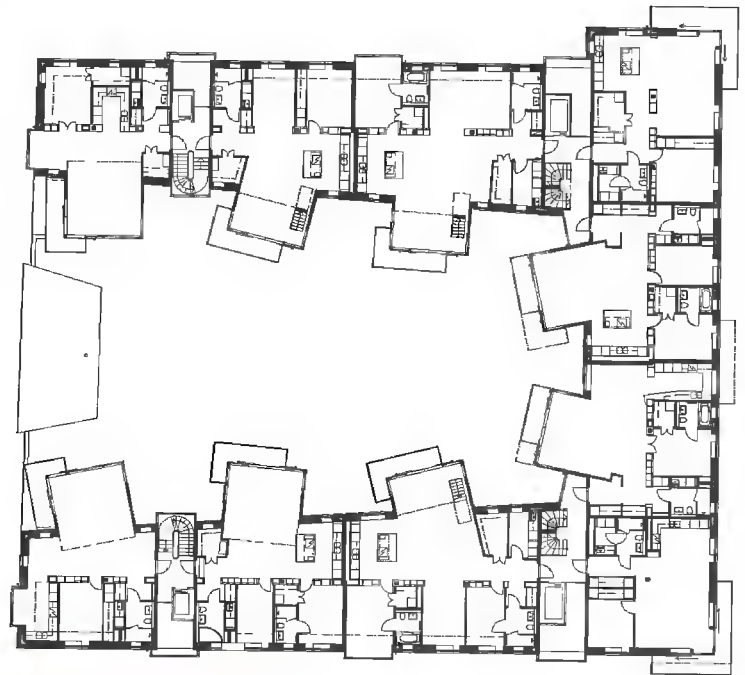






First floor plan

- 1. Living room
- 2. Kitchen
- 3. Dining
- 4. Study
- 5. Bedroom
- 6. Storage
- 7. Laundry



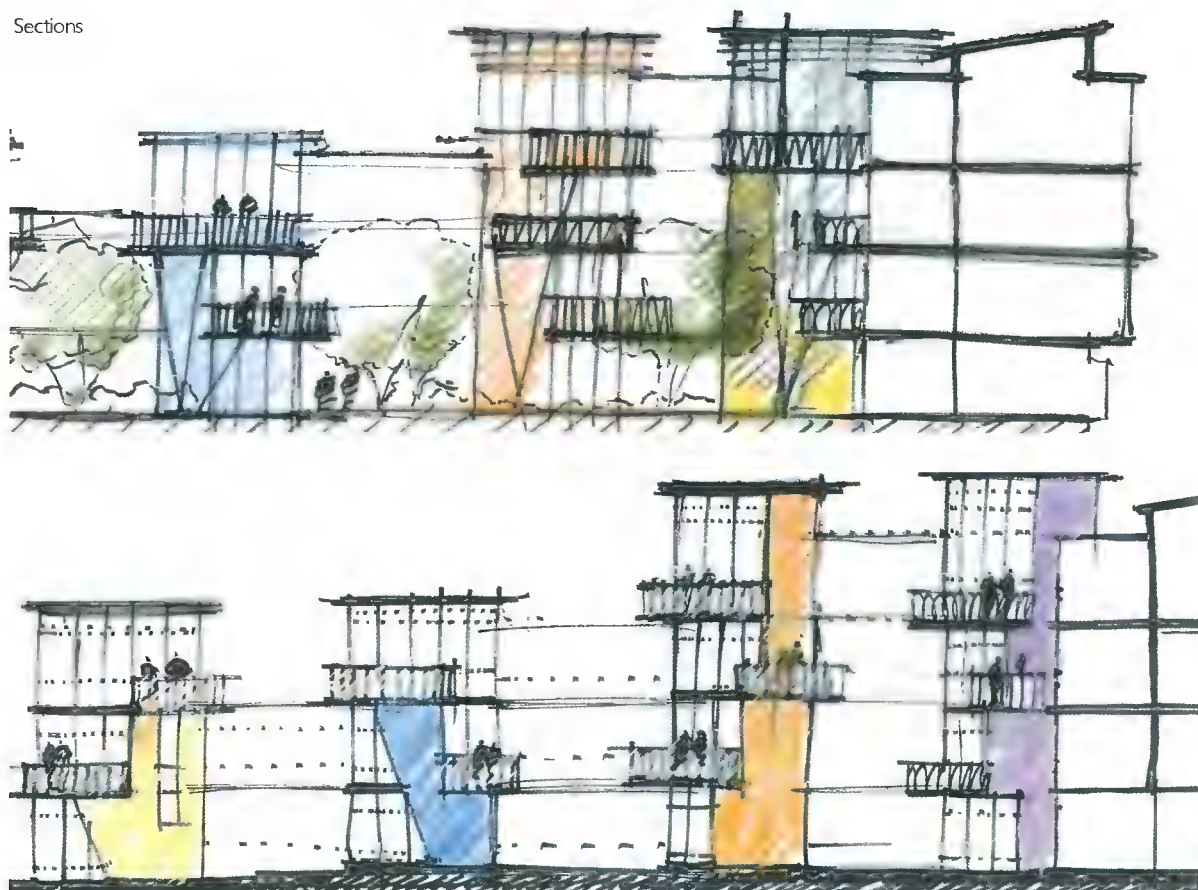
Second floor plan



The materials used in the construction of this building include precast concrete elements, aluminum glazing, zinc metal cladding, slate base, gardened roofs, and solar panels.



Sections

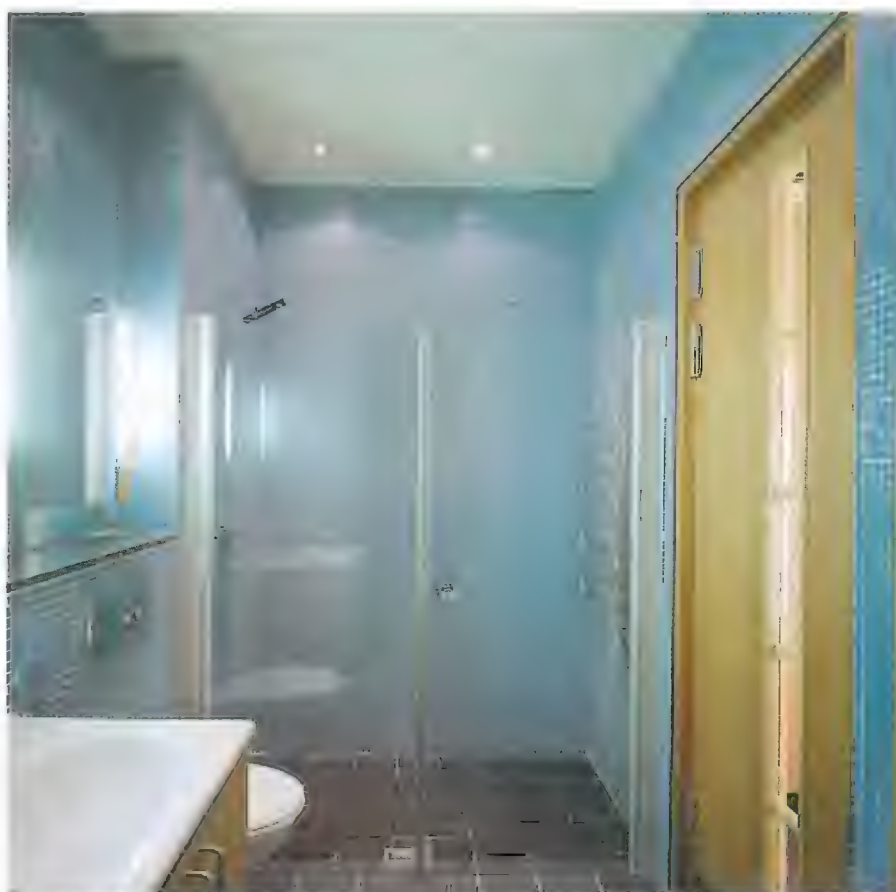






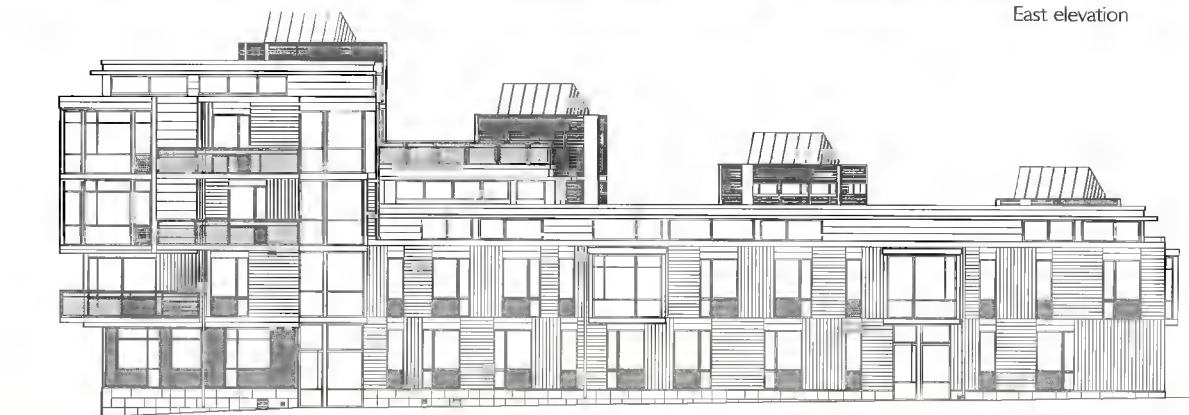


The areas enclosed within the glass towers have a more open and whimsical layout, which is projected toward the patio.





East elevation



North elevation



Christian Hauvette *166 Logements en ascension privée*

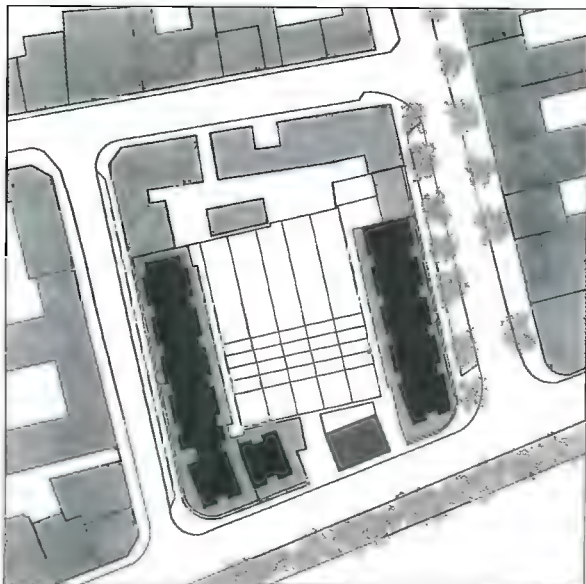
Rennes, France

This project is located in an area very close to the town centre of Rennes. The planning regulations and the landscaping plan of the area were drawn up by the French architect Alexandre Chemetoff. Christian Hauvette's intervention is based on the construction of a residential complex concentrated in three elevations on a large quadrangular site that is interrupted on its short side, facing the river Vilaine, in order to conserve a small red-stone dwelling that had been on the site for some time. According to Hauvette, this old building was a decisive element in the configuration of the crown of the new building: "The Brigitte house served as an argument for the crowning of the project. It was multiplied on the roofs in the form of armoured volumes of reddish copper, surrounded by large terraces". These house twelve maisonnettes, with single-floor dwellings on the six lower levels.

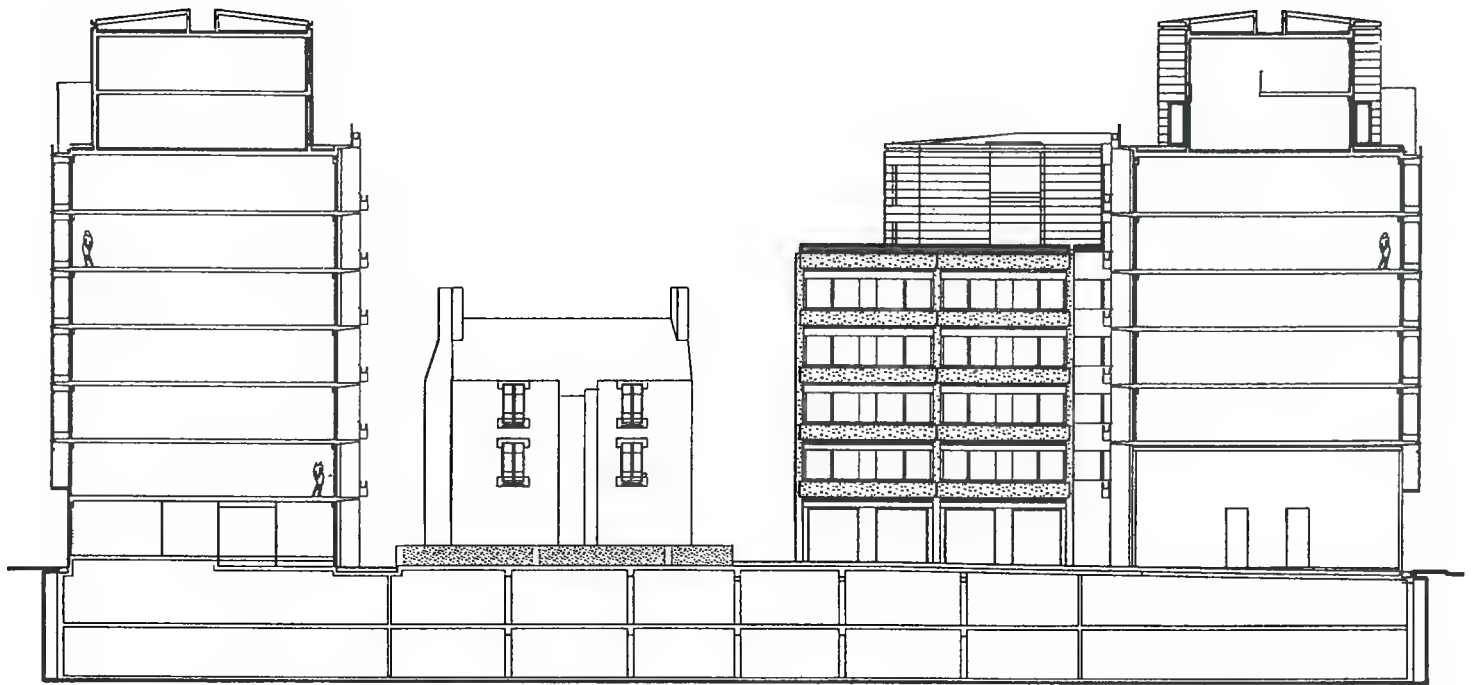
The complex has two faces: it is more hermetic towards the exterior of the site, and more transparent and open toward the interior. On the street side, the building is protected from traffic noise by a metal structure that forms the support for the glass panels of the balconies and large awnings that provide protection from rain and sunlight.

The part facing the interior is configured by a mesh of polished concrete that forms wide balconies designed as boxes for plants and flowers. These form a vertical extension of the garden designed by Chemetoff, which occupies the centre of the plot above the underground car park.

Photographs: Nicolas Borel







Cross-section from the garden



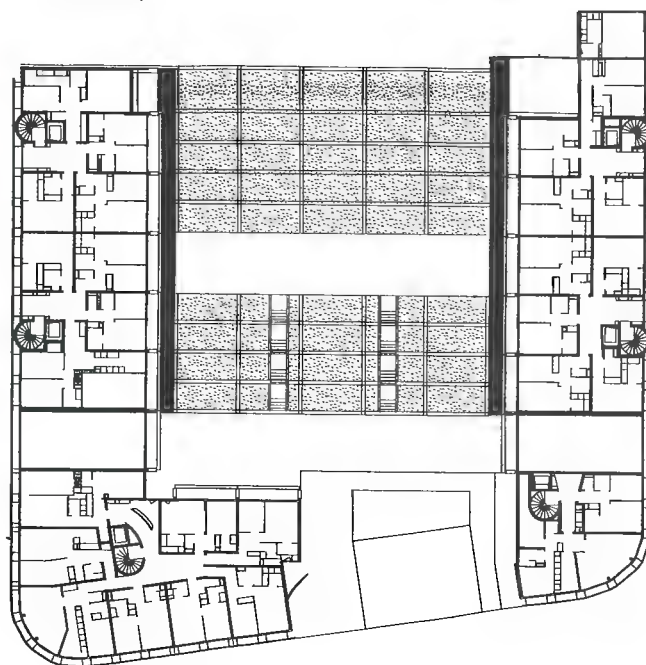


The facing page shows a front view of the facade of the complex facing the River Vilaine, with the small existing building between the two new volumes. The new volumes have six levels of single-floor dwellings and a double height area at the top housing twelve small duplex apartments that are expressed on the exterior in geometric elements clad with copper plate surrounded by balconies.





Typical floor plan

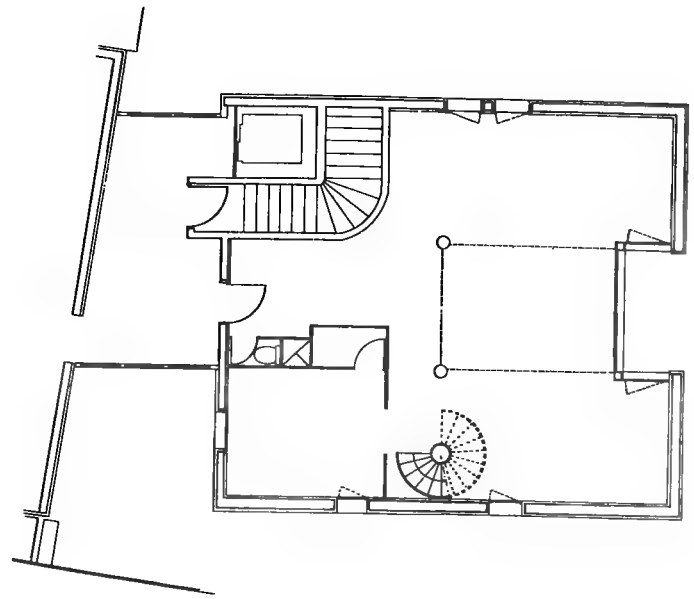
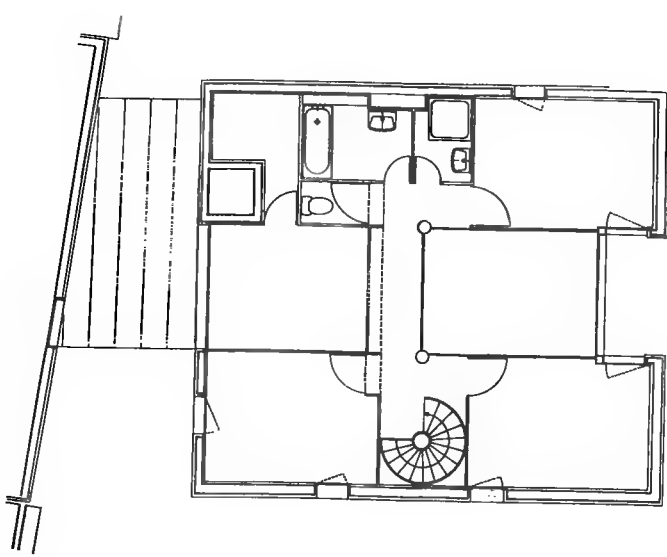


The project uses two types of facade. Towards the exterior, the building is protected against the noise of the street behind a metal structure that forms the support for the glass panels of the balconies and large awnings that provide protection from rain and sunlight. The part facing the interior is configured by a mesh of polished concrete that forms wide balconies designed as flower boxes, which in the future could dress the facade with plants and flowers as a vertical extension of the garden.

The residential complex located in central Rennes embraces a quadrangular site whose interior is occupied by a raised garden.

The U-shaped ground plan of the complex is interrupted at the shortest side in order to conserve a small red stone building that was already on the site.





Ground floor and upper floor plans of the small duplex apartments located at the top of the complex.



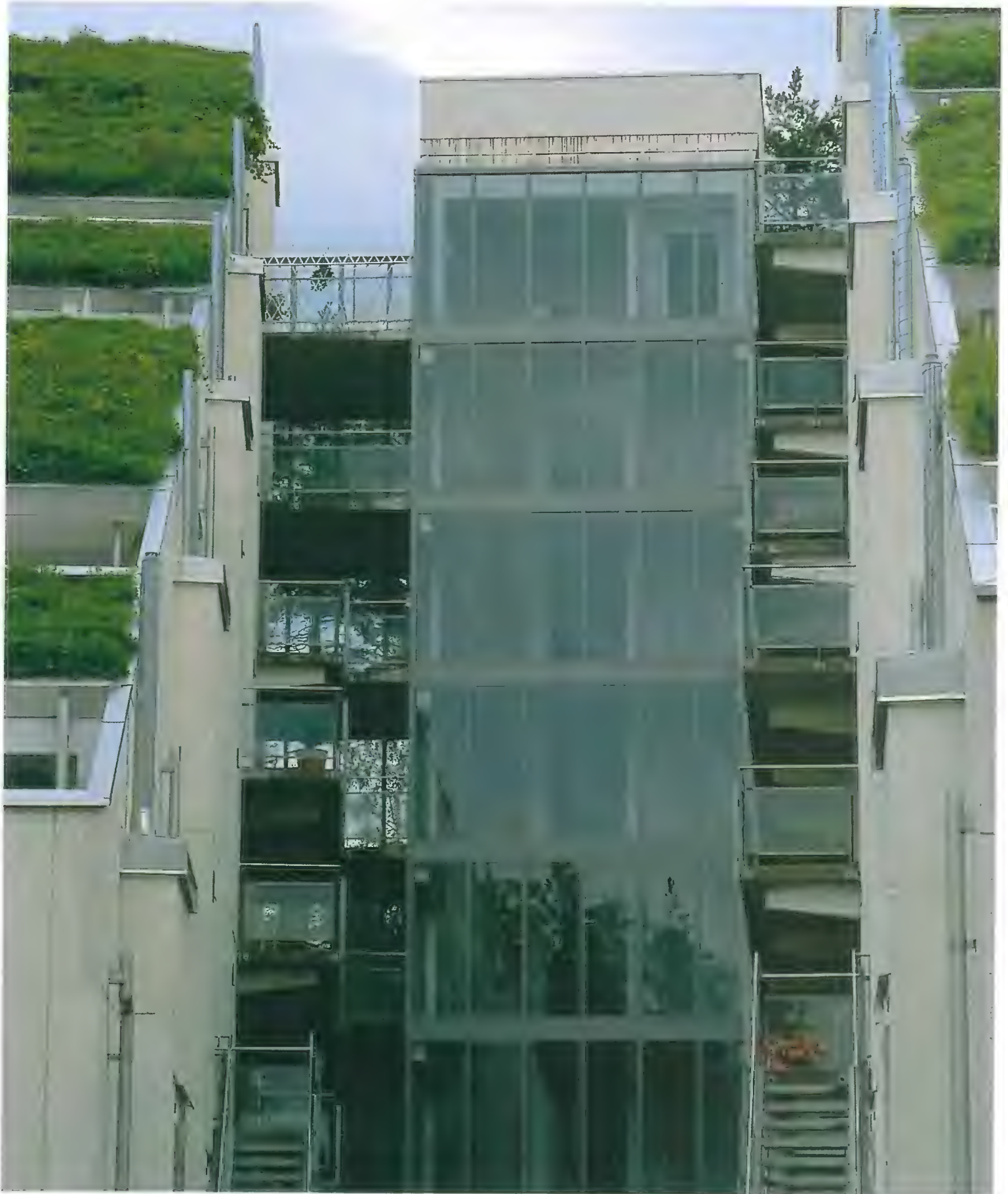
Helin & Siitonen *Experimental House*

Boras, Sweden

Living at the end of the 20th century calls for a new approach to planning new housing solutions, and new types of houses. This experimental house is formed by two wedges with an atrium between them, i.e. an extended stairwell forming a central common area. All apartments are entered through this area on the ground level, through the staircase and corridors, or using the private stairs directly to the second floor apartments. The connections with the existing human landscape and the verdant nature have served as a starting point in the design of this house. The same principle has been followed in the whole Hestra area, to minimise the changes in the landscape. The house includes 24 one-level apartments on the top floor sized 63 sqm. (8 rooms + kitchen) and eight of them of 97 sqm. (4 rooms + kitchen). These two-level apartments have a sauna and terrace on the roof. The foyer and the kitchen are located along the atrium, but the bedrooms and the living room are along the more private and quiet outer side of the wedge. The apartments are flexible, highly functional in a variety of living conditions and well suited to different lifestyles. The framework of the building is reinforced concrete. To emphasise the connection with nature this building has a turf roof. All vertical installations, air conditioning, plumbing and electrical, are assembled on the facades around the atrium, making them accessible for service and changes.

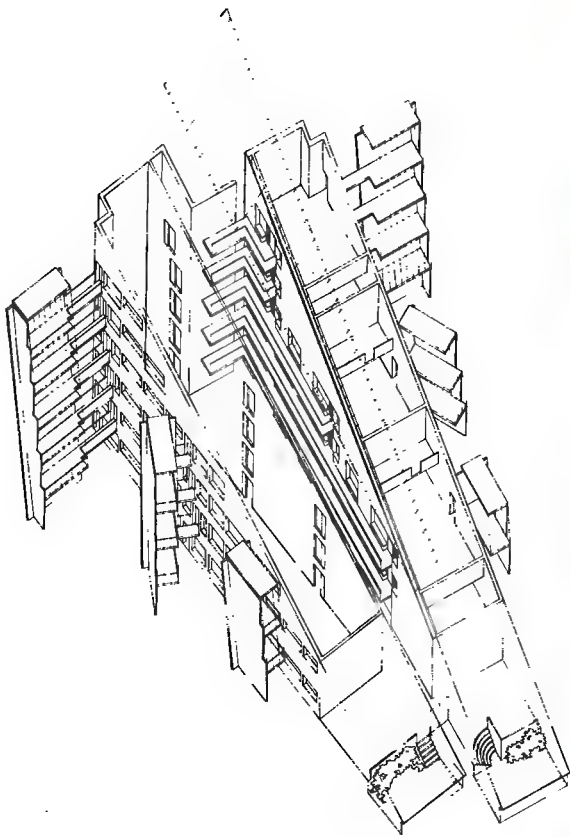
Photographs: Tita Lumio

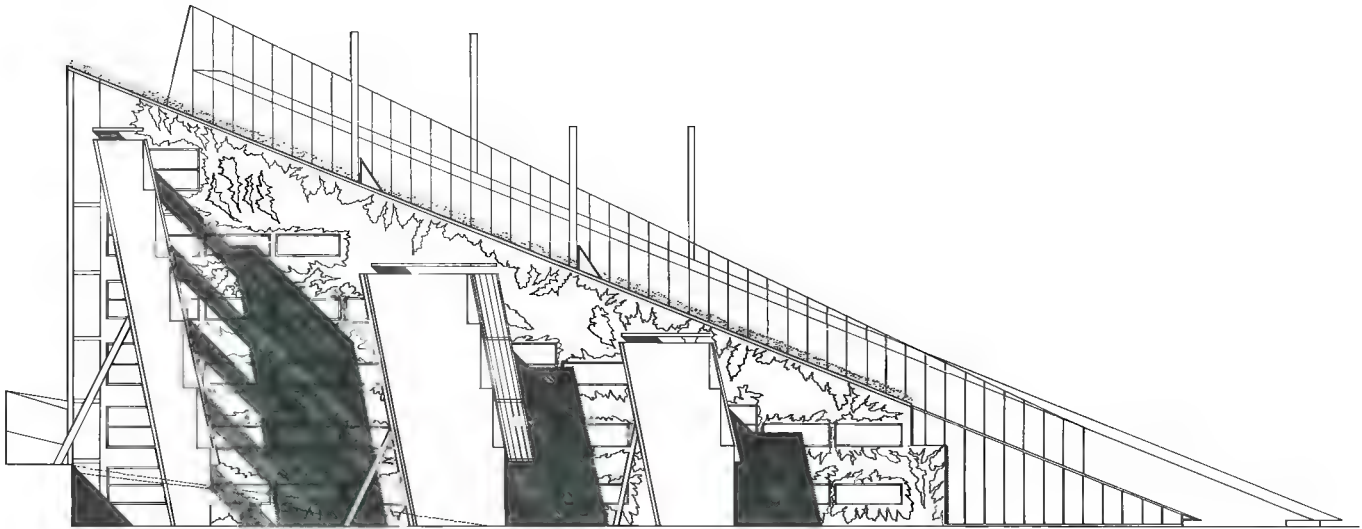




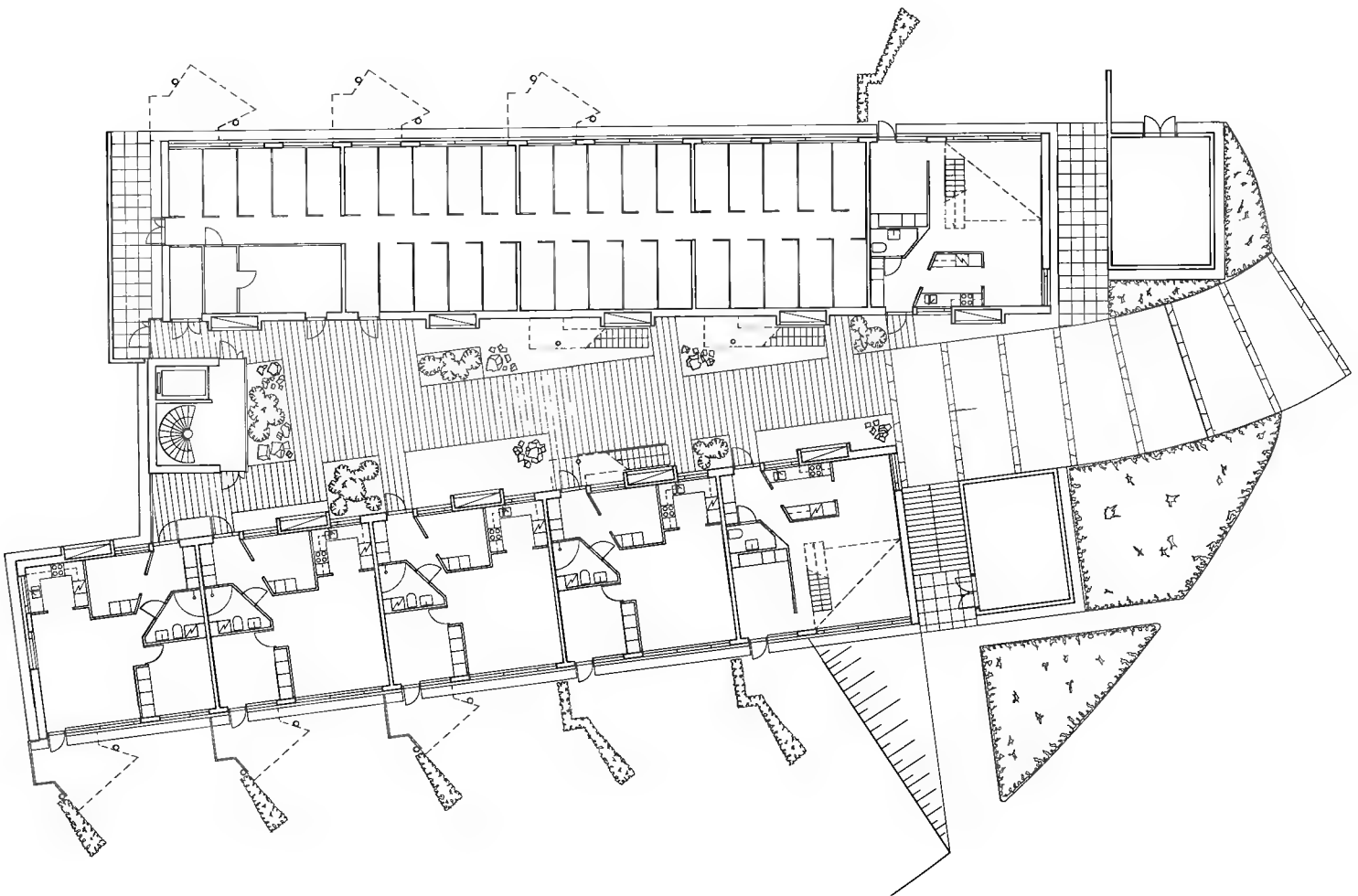
The water insulation is covered by a 20 cm thick layer of sods overlaid with soil and seeded; the future development of the greenery will be the work of nature.

Site plan

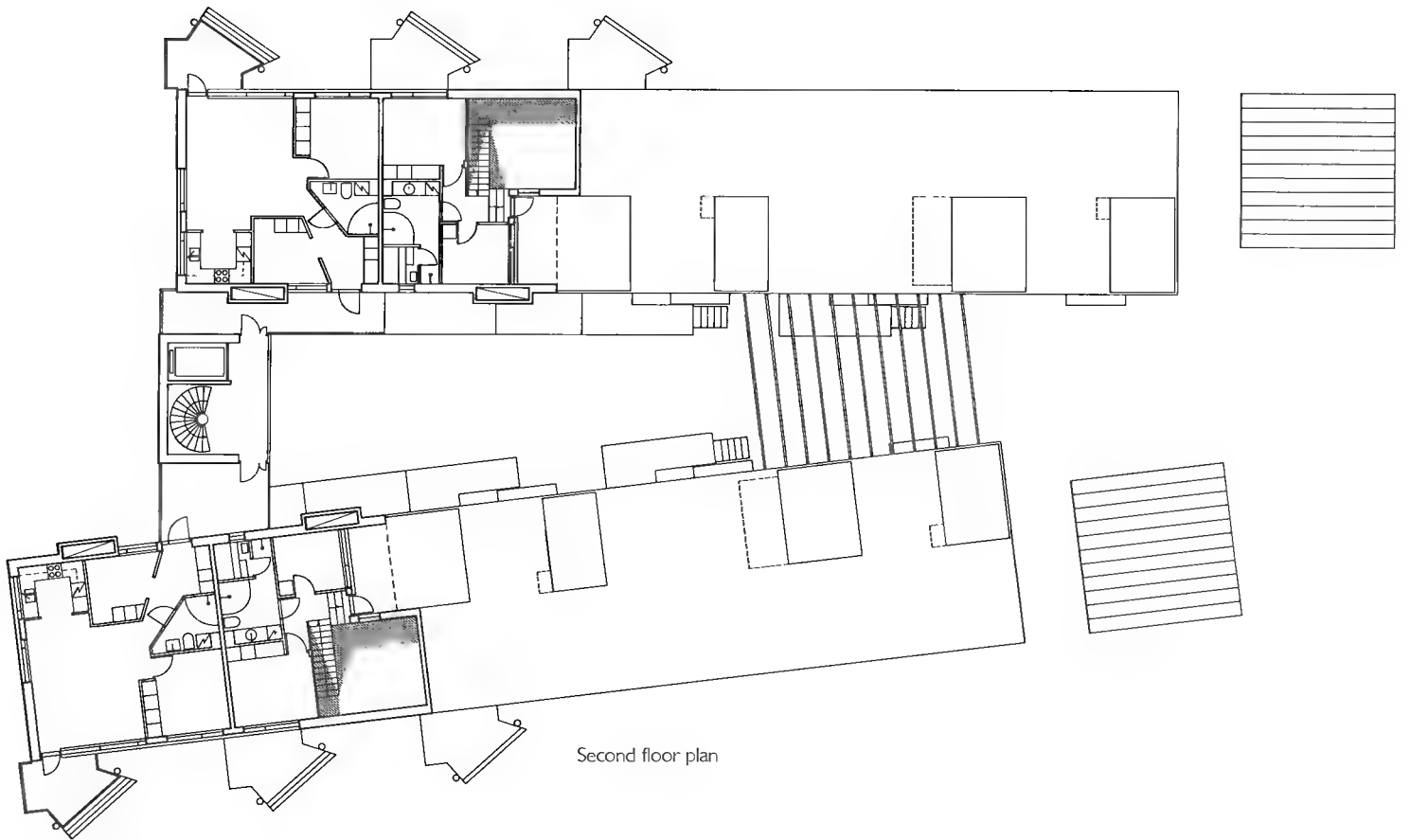




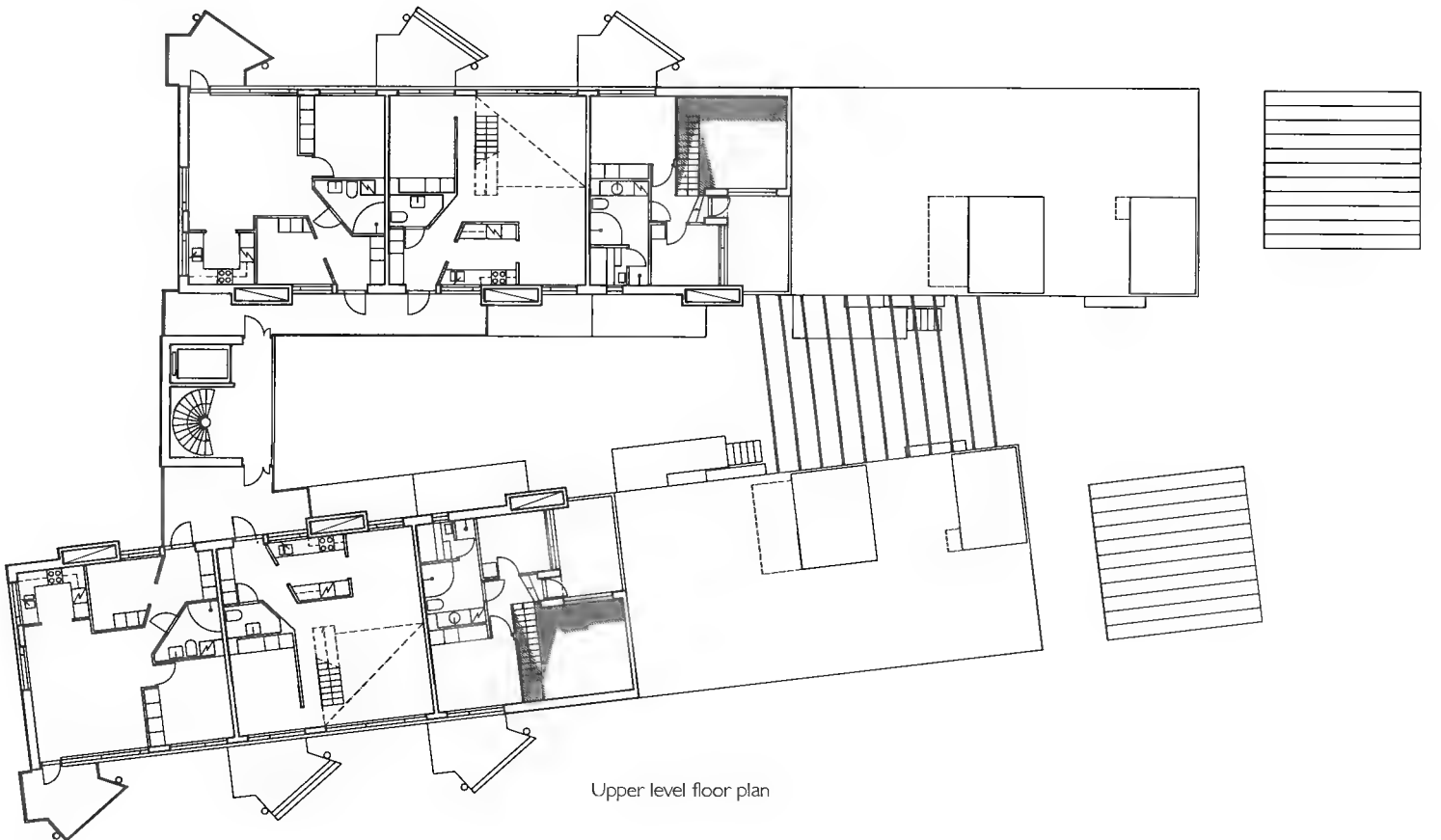
Longitudinal section



Ground floor plan

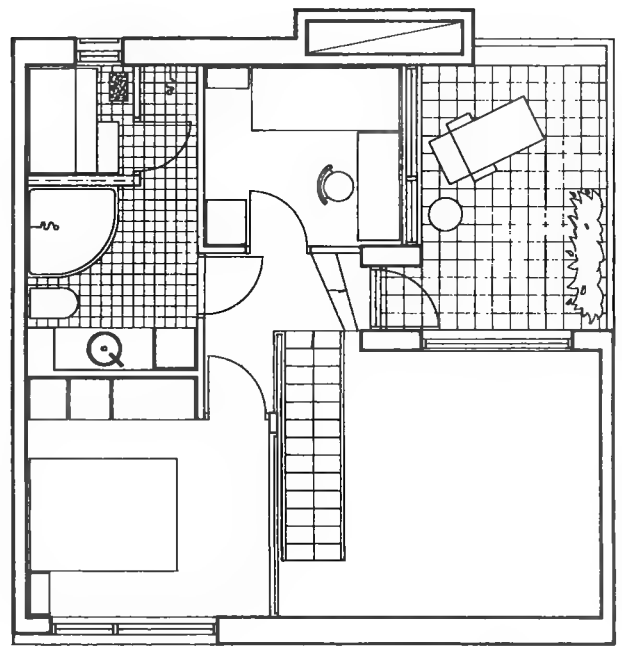
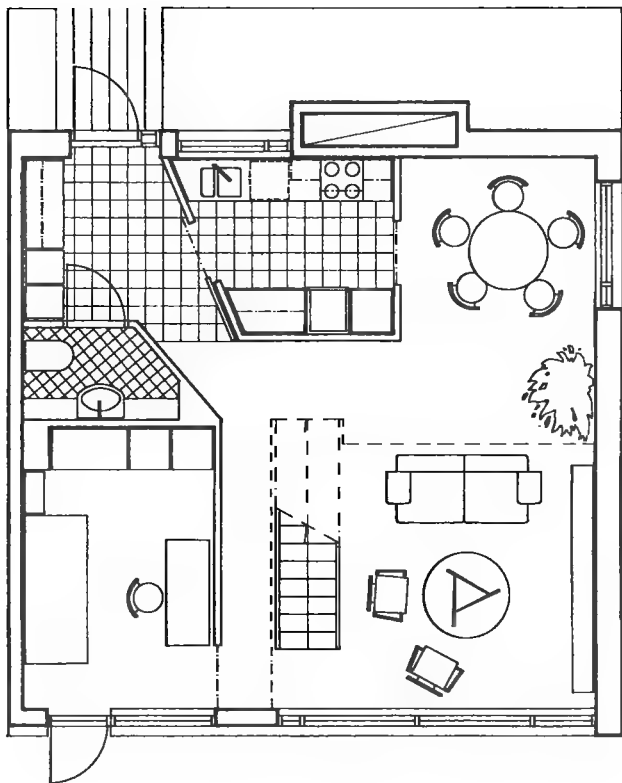


Second floor plan

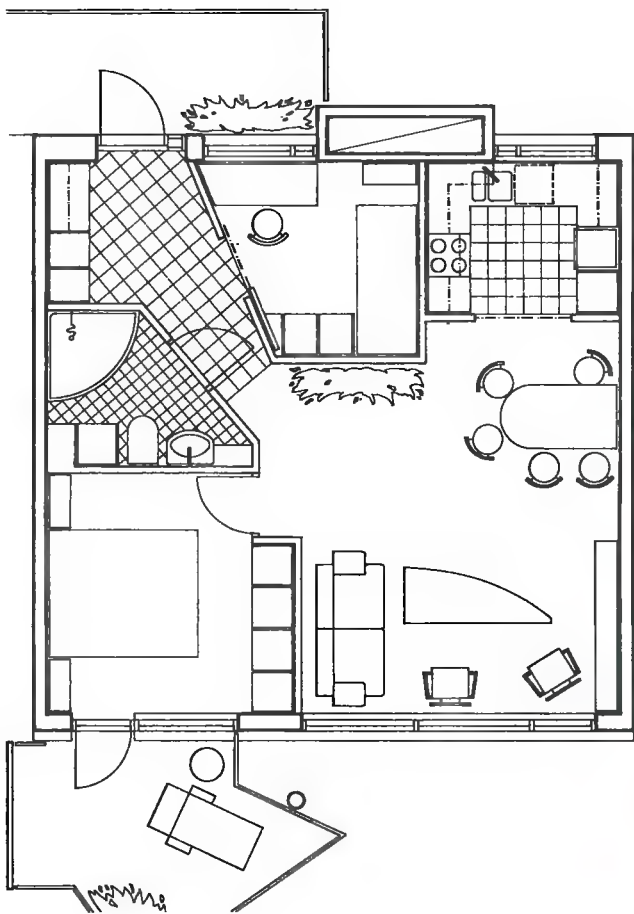


Upper level floor plan





0 05 1 2





All these apartments have penetration to two different directions, which makes them spacious and well lighted. This impression is emphasised by the long diagonal views from the entrance, through the living room to the surrounding nature.



AVI Architekten:
Butz Dujmovic Schanné Urig
Wohnpark am Betzenberg

Kaiserslautern, Germany

This five-house development, which stands upon the red sandstone quarry remains at the edge of the city center, follows the theme "Architecture versus Nature". This theme stands for all the important decisions that make up the planning itself. There is a sense of communion between the external and internal, made possible by the materials and spatial distribution, both of which vary from house to house depending on the specific surroundings. All five houses are surrounded by red sandstone rocks to the North and forest and meadow to the South. To the North, East and West the homes are clad in horizontally placed larch-wood planks - the facade's unifying element. To the South the houses open onto the meadow and forest via wood-framed sliding glass doors. The balconies on this facade are the connection between interior and exterior and serve as sun shading during the summer.

On the roof, which is equipped with high gauge insulation, there is a special layer for channeling rainwater. The surplus rainwater drains through the ground without adding to the municipal sewage.

A flexible ground-floor design was made possible by a lack of bend-resistant corners between the wall and the ceiling - there are no tie walls. The rooms have been individually designed for their corresponding requirements; for instance, the view (garden, house, red rocks) dictates the interior of the second house, where the ground-floor plan is oriented towards the red rocks (entrance) and also towards the meadow and forest (terrace). Here, the walls and ceilings are of facing concrete. Satin-finished floor-to-ceiling glass panes limit the plumbing units in the inside of the rooms. All electrical and sanitary installations are either free-standing or set behind glass. Conserving resources and high-energy efficiency were fundamental in the construction method used in this project.

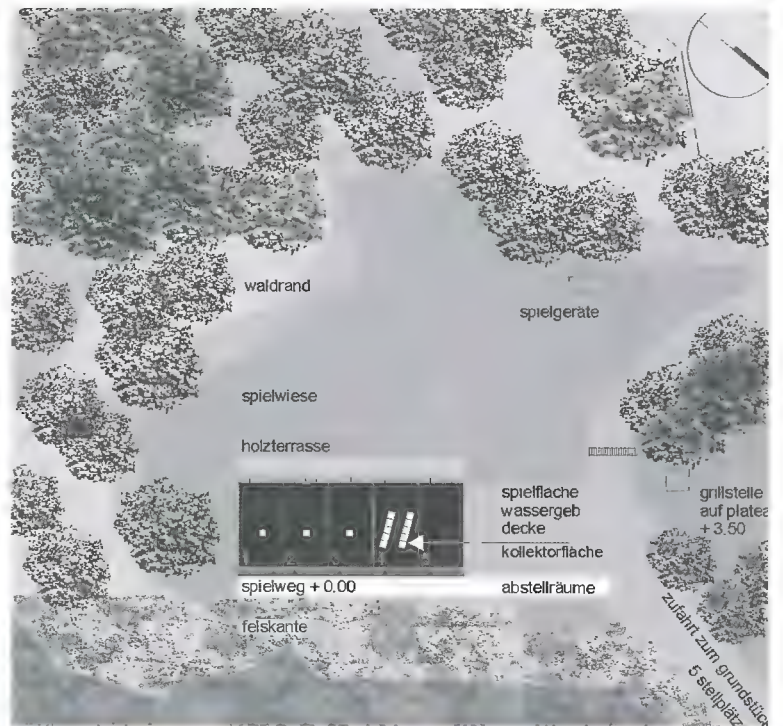
Photographs: Michael Heinrich







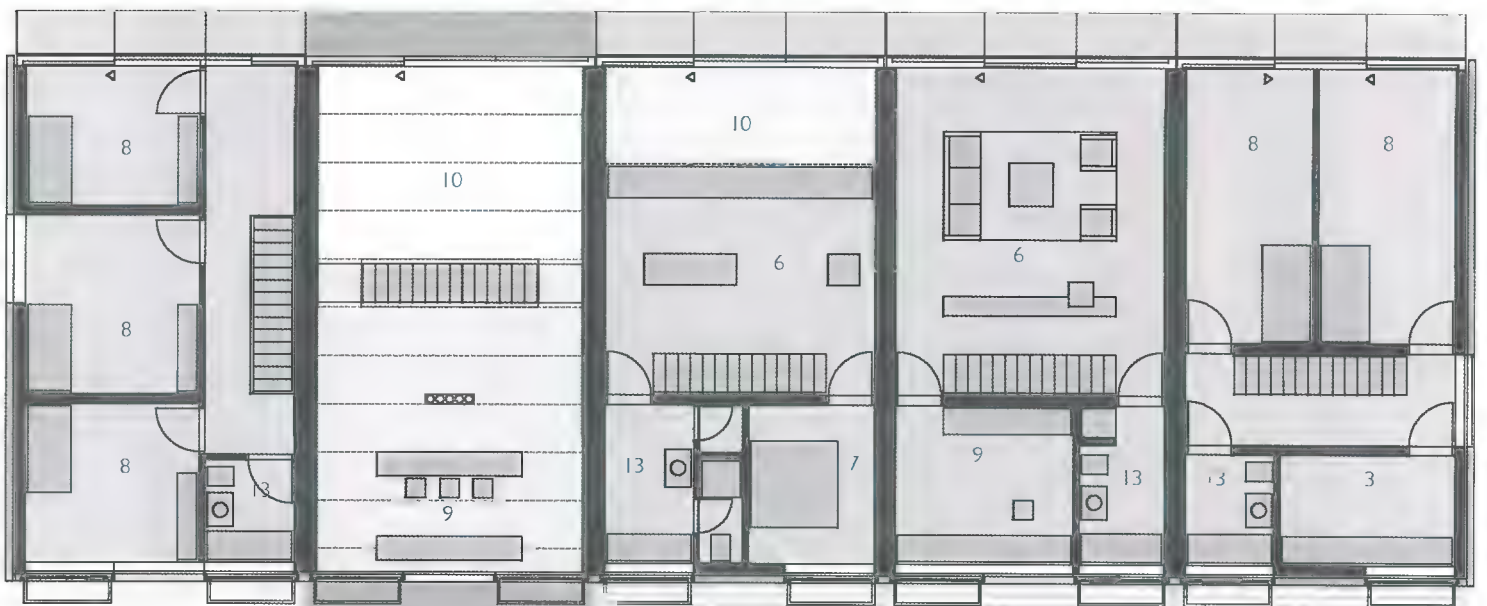
Site plan



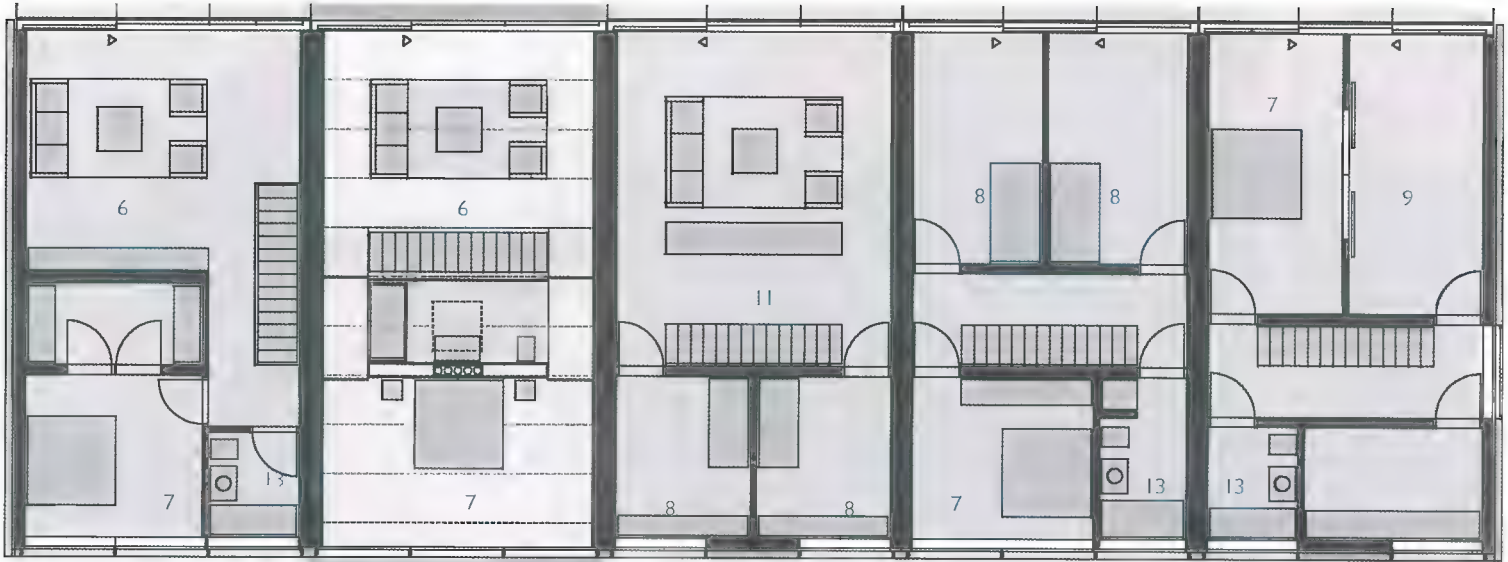




Ground floor plan



First floor plan



Second floor plan

- | | |
|-----------------------|-----------------------|
| 1. Entrance | 8. Children's bedroom |
| 2. Kitchen | 9. Study-Workshop |
| 3. Storage room | 10. Void |
| 4. Living-dining room | 11. Play area |
| 5. Dining room | 12. Terrace |
| 6. Living room | 13. Bathroom |
| 7. Double bedroom | |



Three of the facades are clad in horizontally-placed larch-wood planks, thereby establishing a link with the surrounding woodlands. The complex receives a maximum of sunlight through south-facing, floor-to ceiling sliding glass doors.

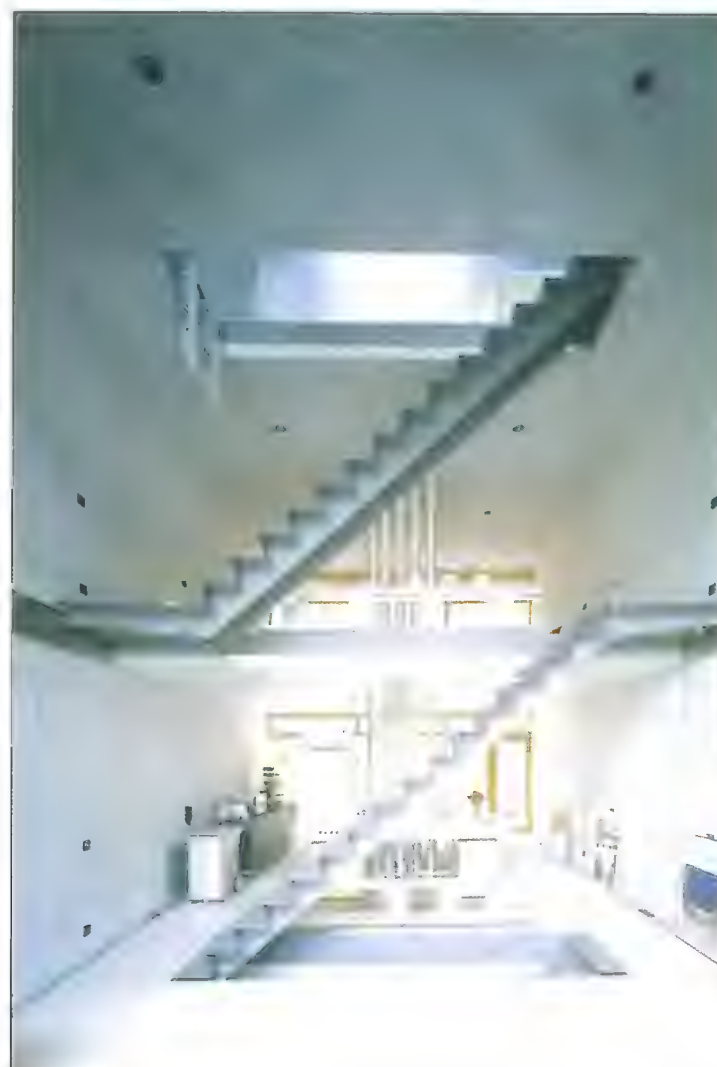


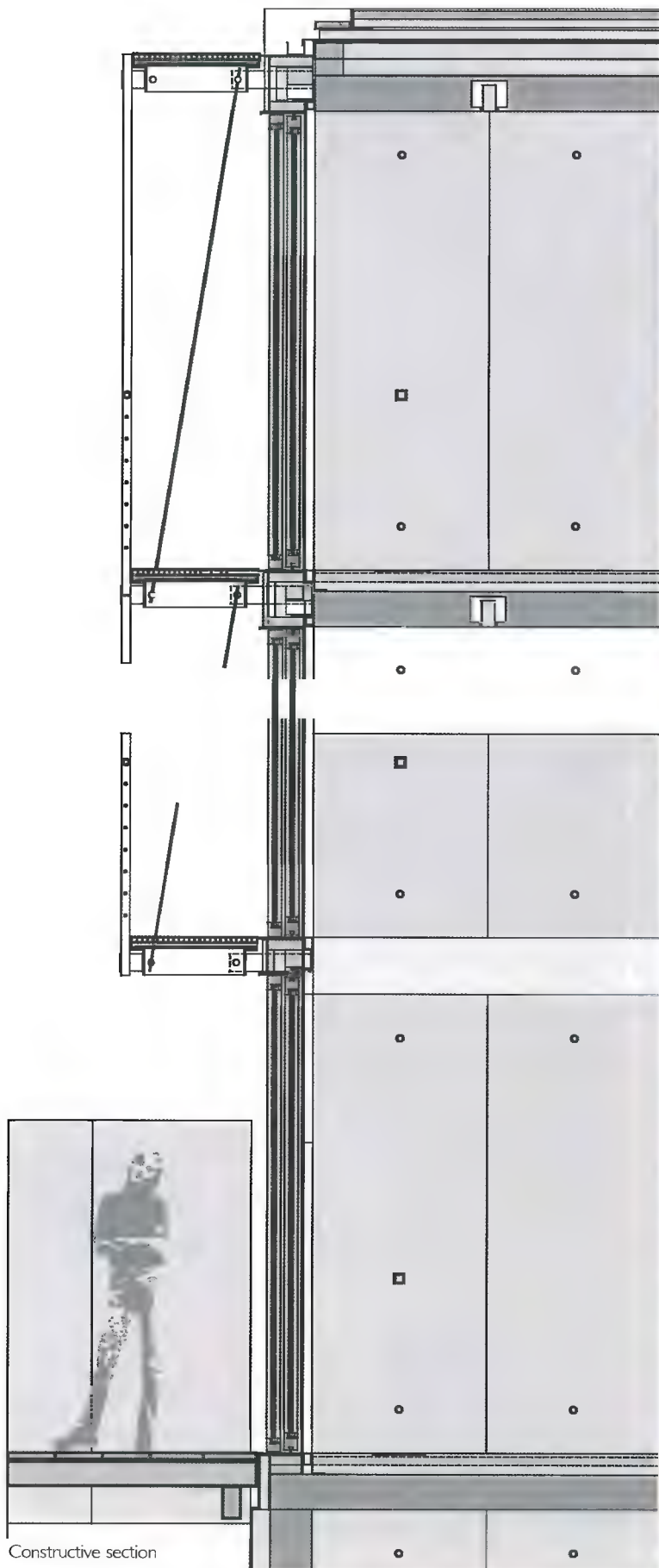
South West elevation

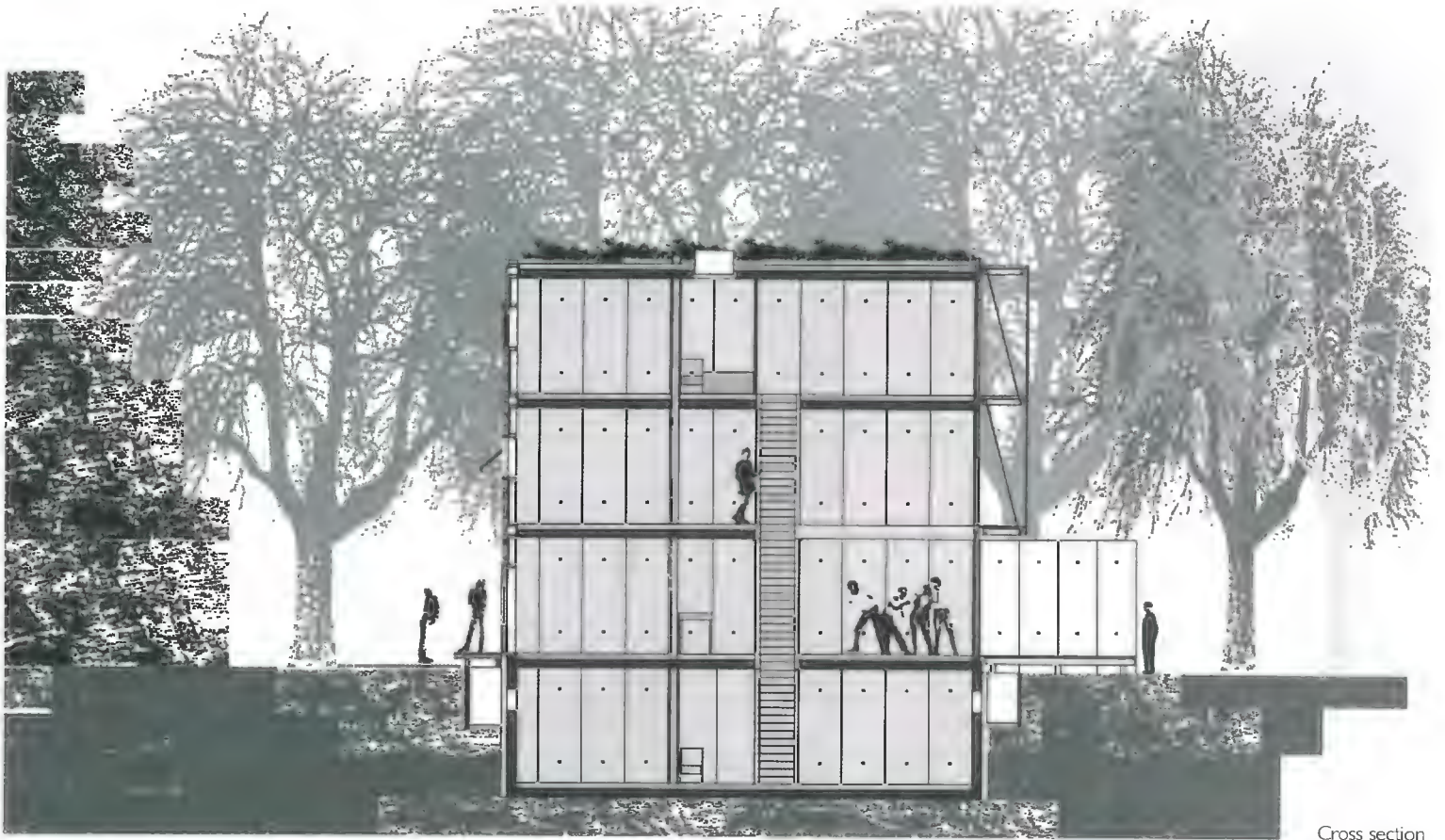




North East elevation







Cross section



Annette Gigon & Mike Guyer *Residential complex in Kilchberg*

Kilchberg, Switzerland

The land around the Broëlberg residence, an early 20th century villa, consists of a park bordering on open landscape, near Zürich Lake. In this green area, that now is in great demand from the people who prefer to reside outside the urban environs, it was planned to build a residential complex selecting six sites with concentrated, volumetrically distinct three-storey buildings with varying concepts of habitation.

Three buildings by the architectural team Gigon & Guyer are the only ones finished until now. They form a volumetric complex linked via a one-storey podium with space for parking underneath. The podium itself forms a raised courtyard which provides access to the buildings.

Two of the buildings house four apartments and a penthouse each, the third consists of a row of four units. In most of the apartments, the kitchen and dining areas face the podium while the living room with projecting conservatory and the bedrooms face the landscape. The podium itself, a large surface of poured concrete slabs, glass brick and gravel is subdivided into a public access area and semiprivate outdoor seating by means of pavilion-shaped steel structures with plywood planking.

Large windows, like huge eyes, offer a magnificent view of the lake and the surrounding park. A broad aluminium frame somewhat like a cornice encases the blinds, guide rails and wooden window frames. The free-style arrangement of the floor-to-ceiling openings responds to the different types of apartments.

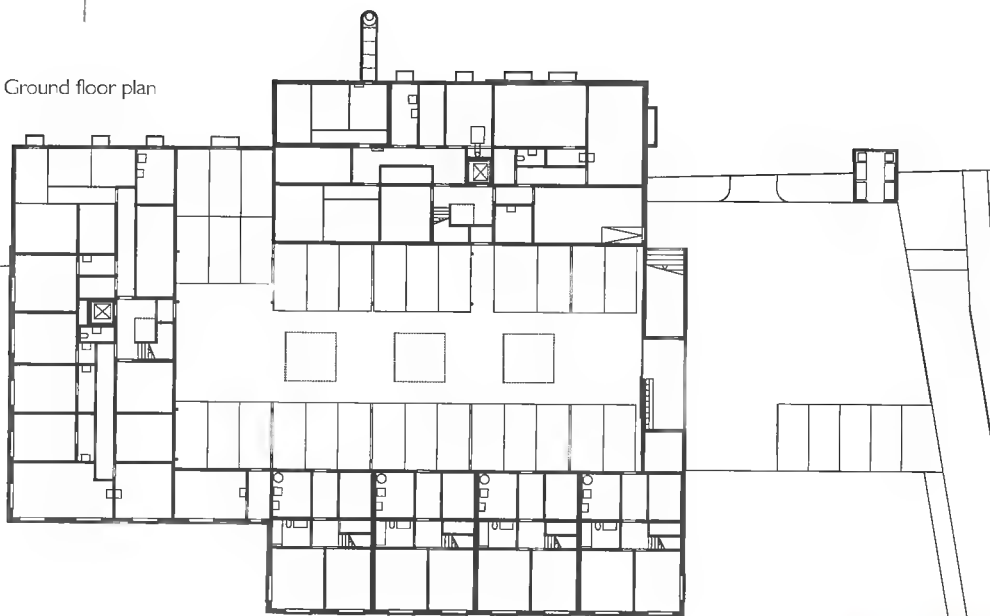
The main facades are masonry with exterior insulation and a fine, evenly coloured, stucco that encases the building like a smooth skin. The dark brown colour of the outside walls is juxtaposed with the light orange walls of the courtyard, generating intense colouring in this space that varies with changes in the natural lighting during the day.

Photographs: Heinrich Helfenstein



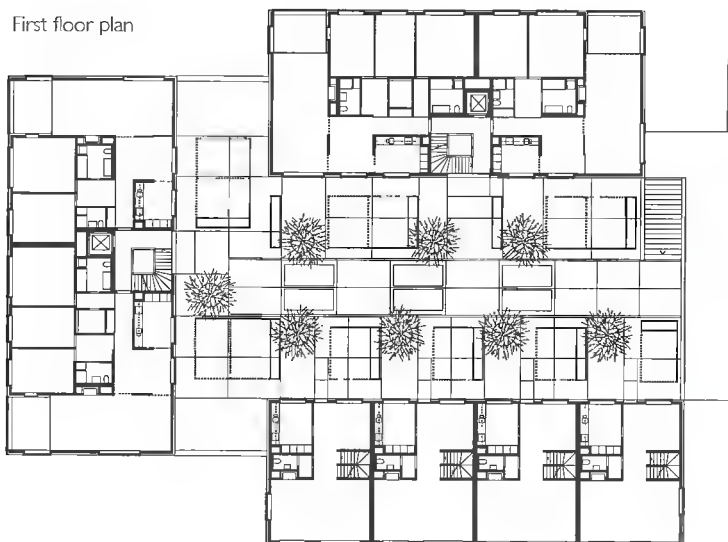


Ground floor plan

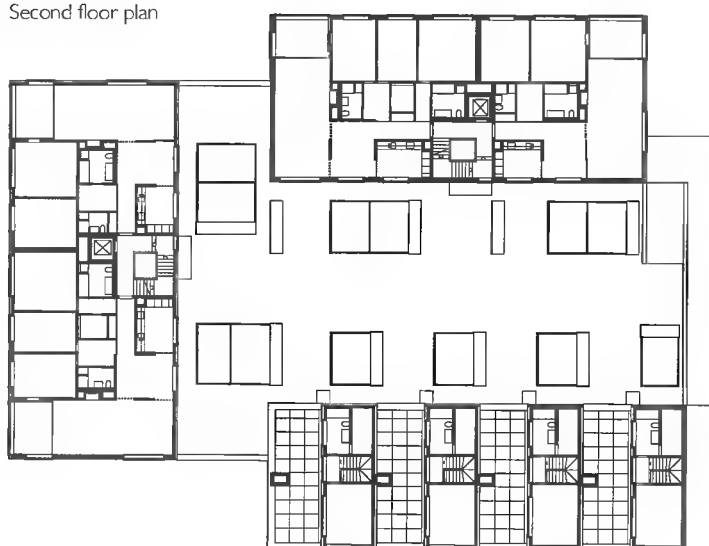


The brown colour chosen for the external facades ennobles the structure of the building and establishes a close relationship with its soft organic composition.

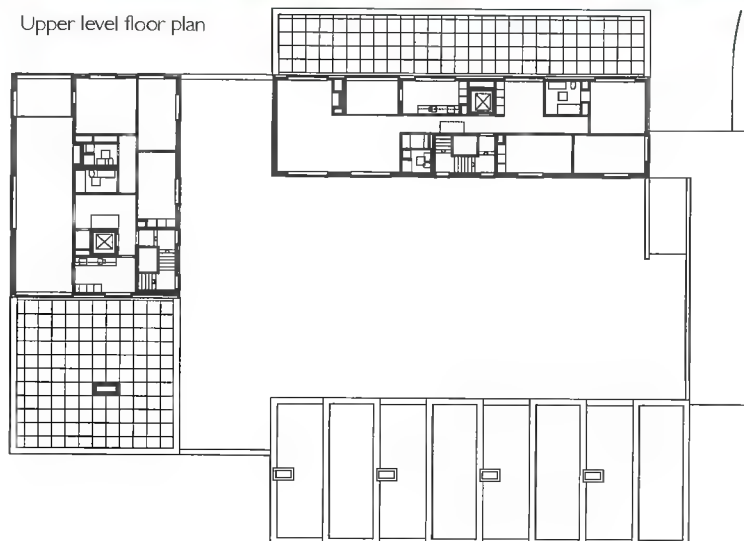
First floor plan



Second floor plan



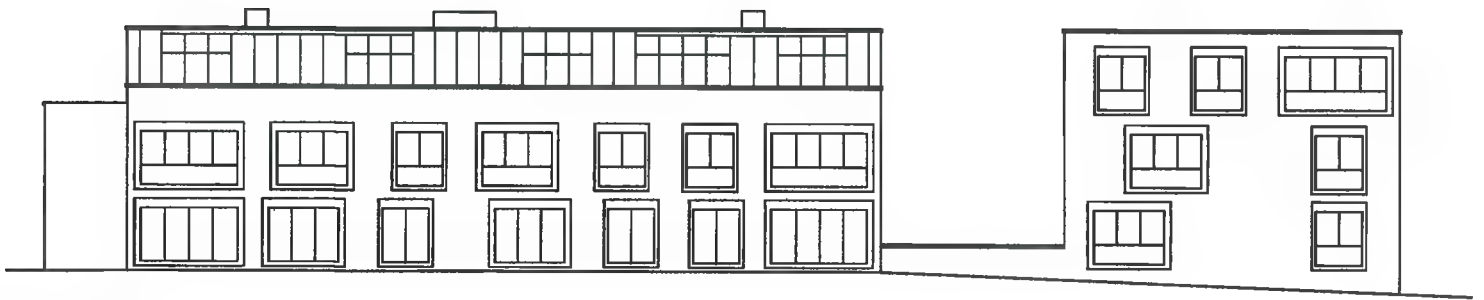
Upper level floor plan



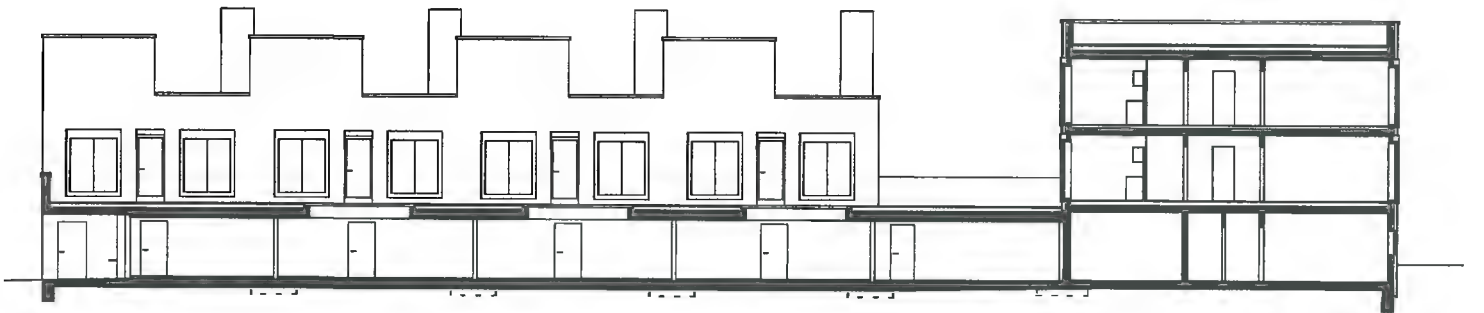


The inner courtyard is organised by means of semi-public spaces in front of the dwellings built with a metal frame and plywood boards. In the photographs below we can see the strong contrast between the dark brown colour of the east facade and the orange colour of the facades that look onto the inner courtyard.





West elevation



North-south section





East elevation



East-west section

Large glazed openings spanned between wrought iron workings allow a constant and uninterrupted relation between the interior and exterior of the dwellings. Thus, wide views of the park surrounding the residential complex may be obtained.



Architectuur studio Herman Hertzberger *Housing Complex*

Düren, Germany

The building, by the firm of the Dutch architect Herman Hertzberger, is located in a rather dismal part of the German town of Düren.

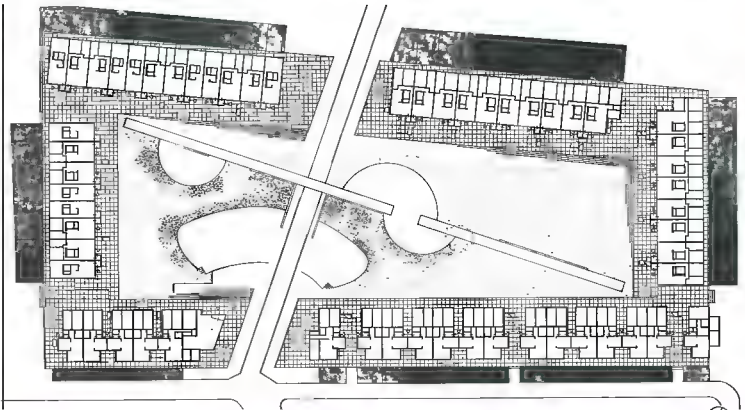
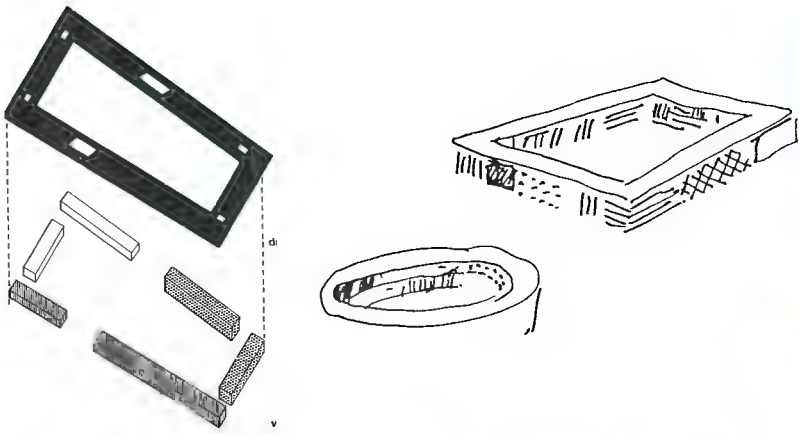
Instead of keeping to the prescribed extension plan and distributing the building blocks all over the site, the project arranges them in a line along the perimeter of the site, thus creating a square building block around a green court in the interior.

This court is accessible from all sides and a street runs over it in the middle, so access to the dwellings is through this community space. The major presence of the continuous roof and the plinth, which shows the difference in building height, provides the whole with a close and clearly defined form.

At the same time, these two elements unify the whole complex. All dwellings have their entry on the court side and, depending on the housing typology, can be reached directly by stairs or over the different galleries.

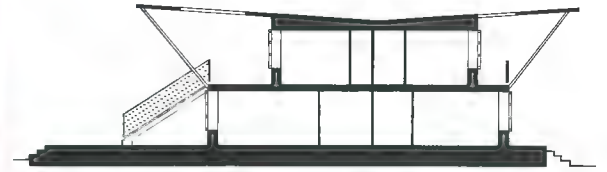
Photographs: Jens Willebrand

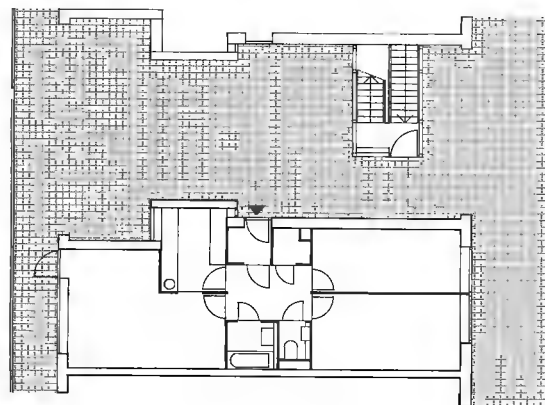
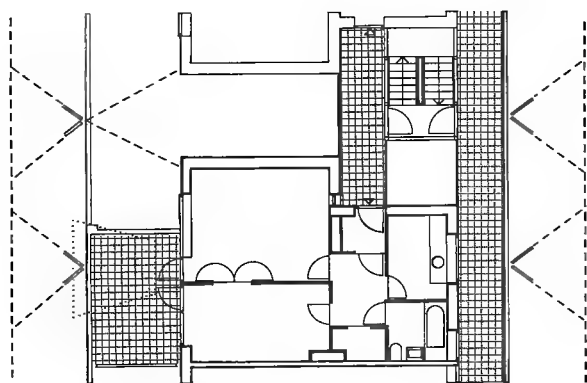




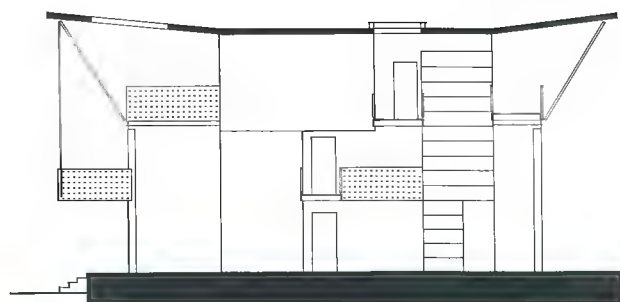
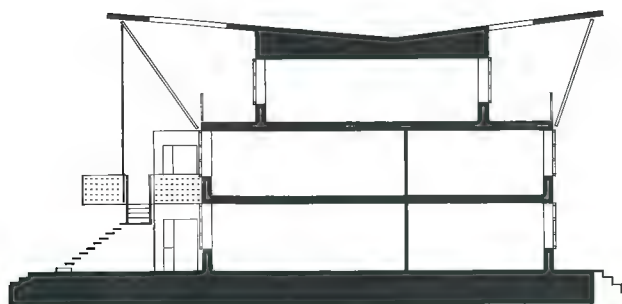


The architect has organised the complex in the form of a linear block distributed along the perimeter of the site, so that it rotates around a green area located in the interior. The access to the dwellings is through this community space.



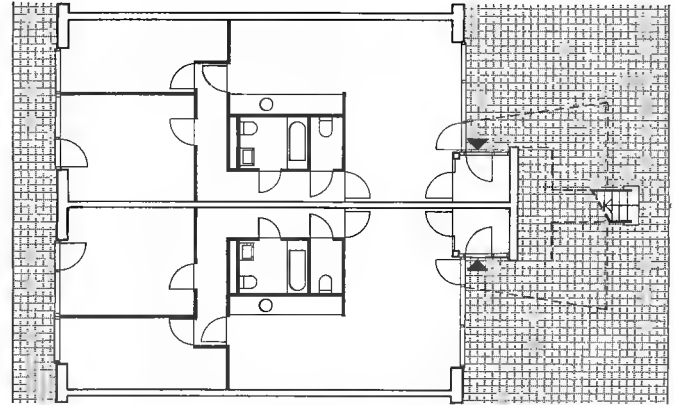
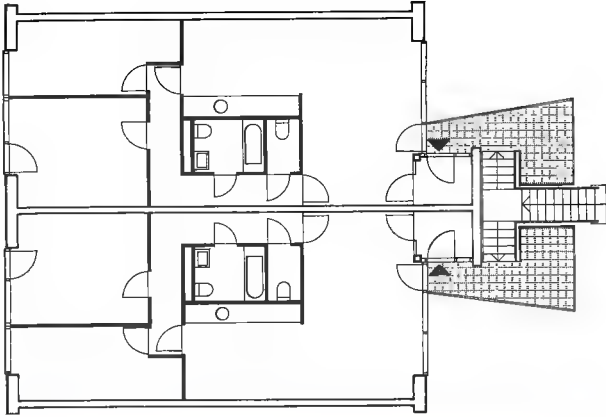


C-Type dwelling
Ground and first floor plans



Cross-sections of the different housing types





B-Type dwellings
Ground and first floor plans





Santiago Calatrava *Buchen Housing Estate*

Würenlingen, Switzerland

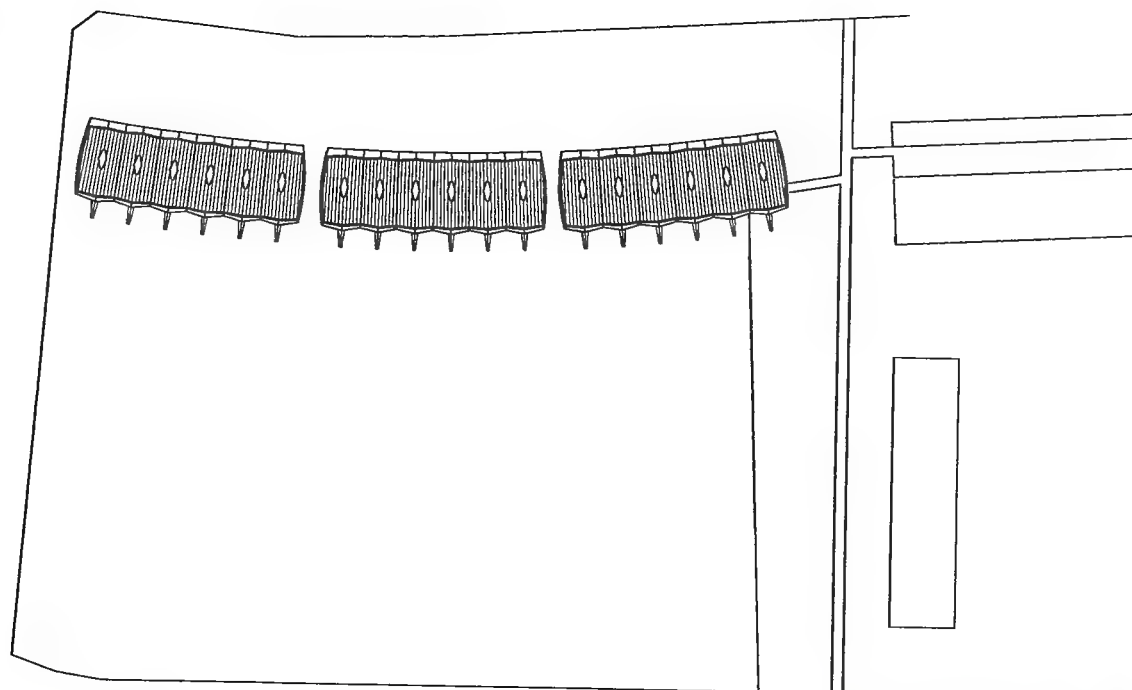
Coexisting with other developments in an open landscape, this series of homes is positioned parallel to the main road of the small town of Würenlingen, close to Zürich. The project called for the construction of twenty-four free-standing dwellings to be arranged in two twelve-unit rows flanking a square, and three groups of six terraced houses to the south of the site, right at the edge of a wooded area. The client, Remer Real Estate, specified concrete to be the main material used in the entire colony, for which reason all the external facades are constructed with pre-fabricated concrete elements. The shape of the building -with the top floor having a wider floor area than the lower ones- is on account of restrictive conditions of the site. The land drops down slightly from the woods, and the slope is used to lock the section and create a series of exterior spaces at different levels. On the low northern side the ground floor opens on to the spacious main entrance portico, while on the other side, staircases -one for each successive pair of units- connect the back doors to the wood's raised land. The backyards on this level are stepped onto straight from the living rooms, which stretch from front to rear. The rooms of a more public nature look out to the double-height portico, creating a semi-glazed facade. Only a narrow concrete panel separates one volume from the other. The volume containing the top floor bedrooms -a total of three per unit- begins right above this continuous and communal arcade space to stretch back toward the woods under a shell-shaped roof. The forward projection of the upper floor is accentuated by the windows of the front bedrooms, which look like eyes staring vacantly at the landscape. A stylised pillar situated at the transversal axis of each dwelling sustains the load of the top floor obliquely, and gives the complex its characteristic image.

Photographs: Hans Ege



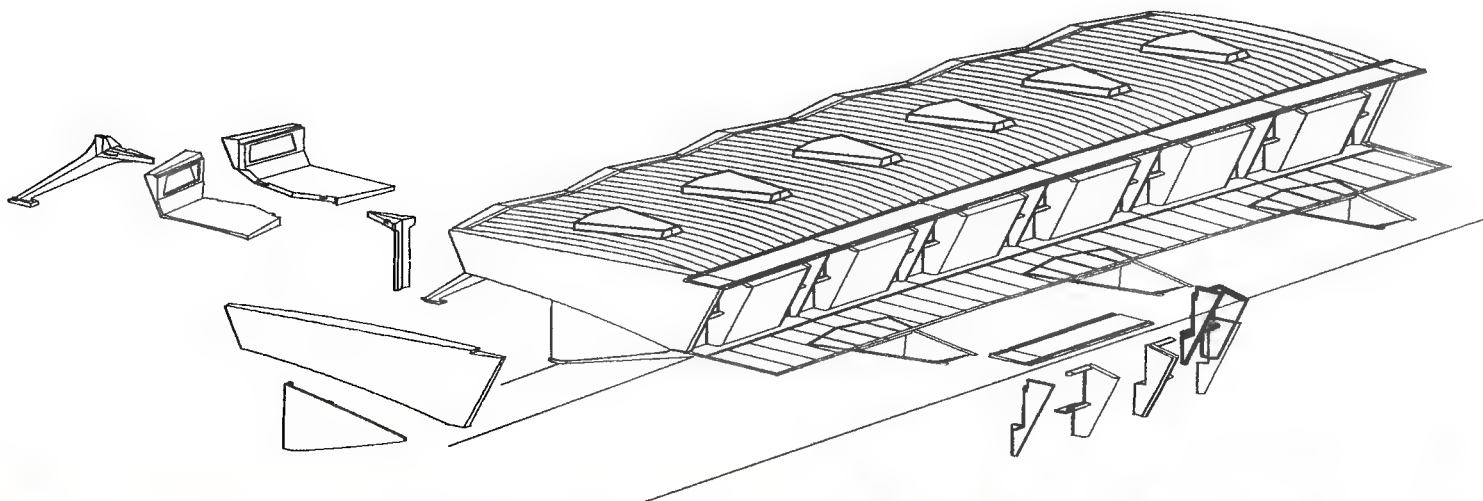
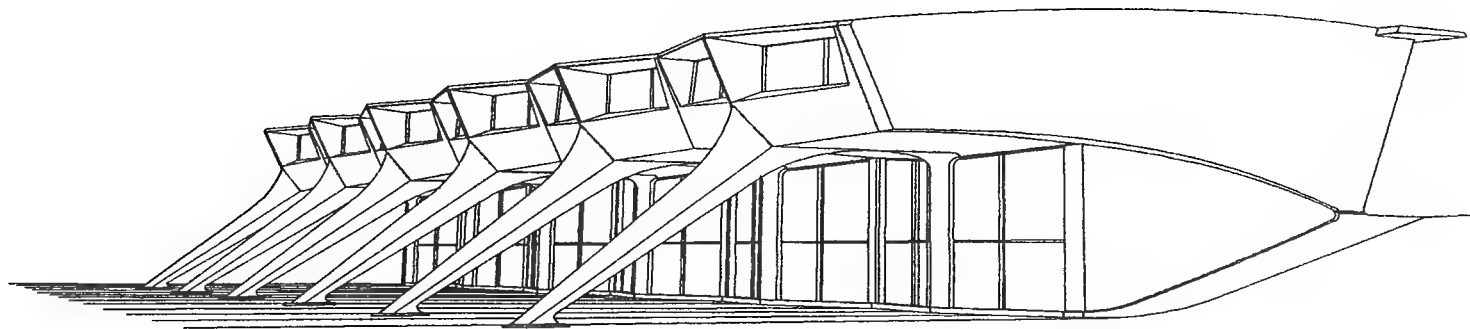


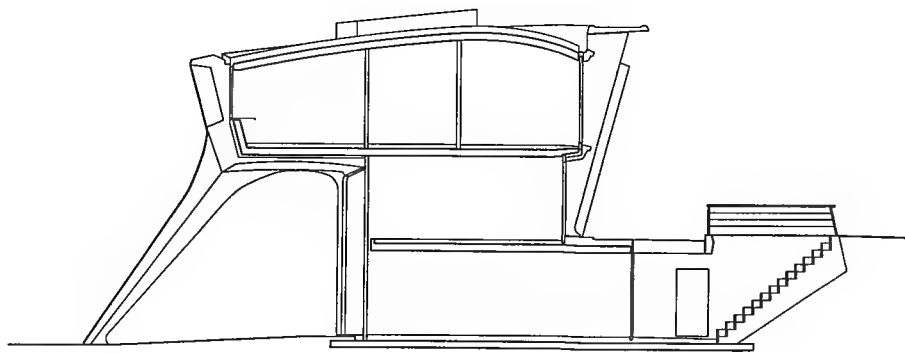
The complex, built mainly in concrete, runs parallel to the main road. The outer walls are made of prefabricated concrete elements.



Site plan

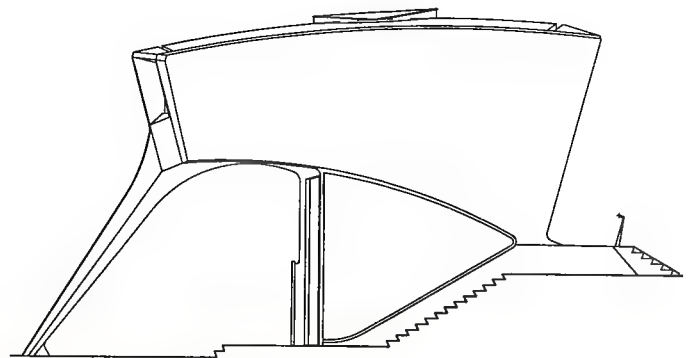






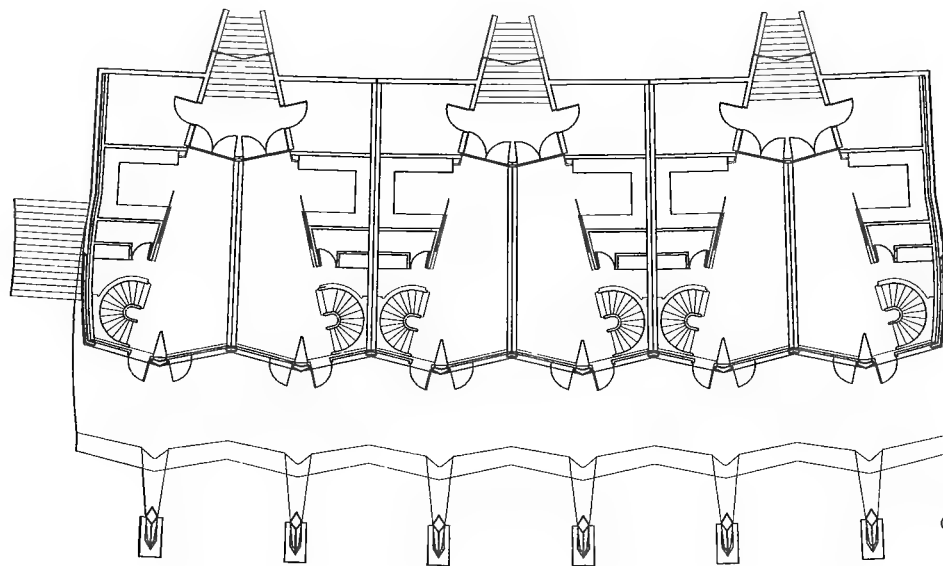
Cross section

The dwellings were fitted into the sloping terrain creating exterior spaces on several levels. The upper volume housing the bedrooms is supported by stylised pillars that transfer the load obliquely to the ground and characterise the external appearance of the complex.

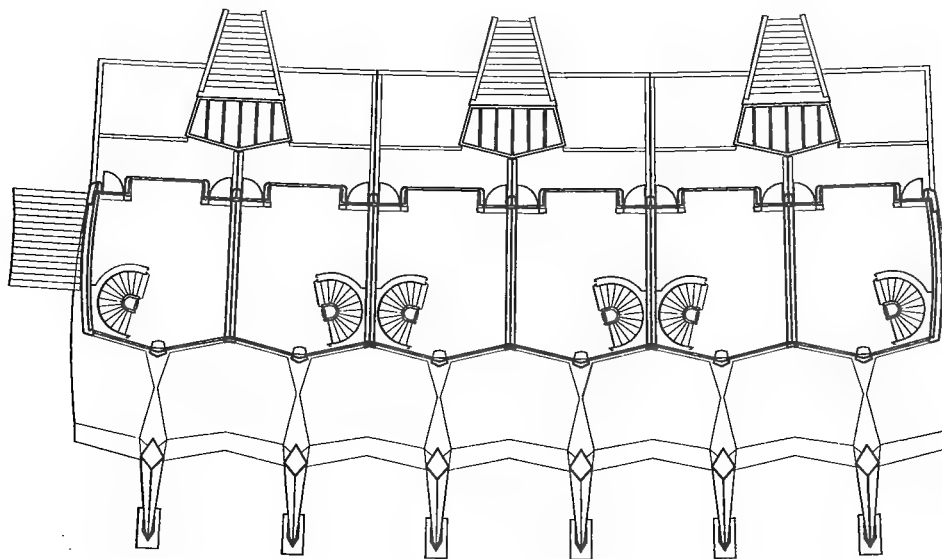


North elevation

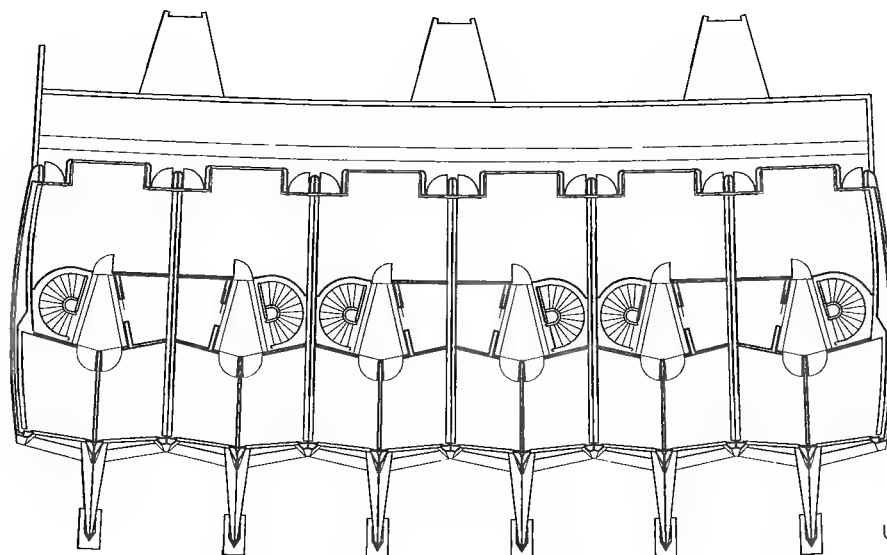




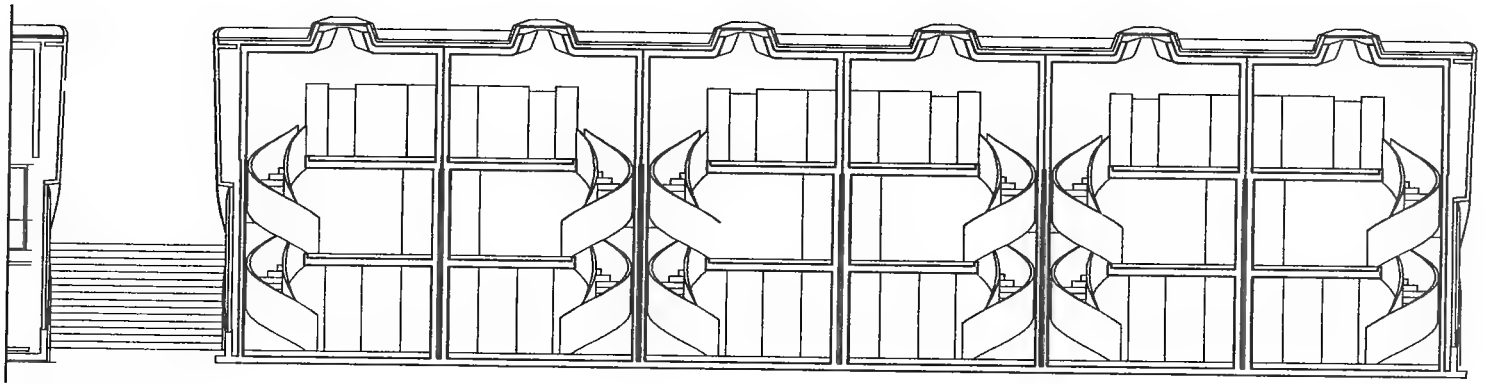
Ground floor plan



First floor plan



Upper floor plan

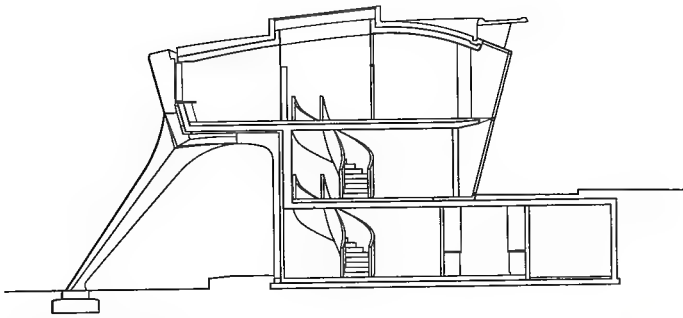


Longitudinal section

The more public premises open onto the double-height portico that is common to all the dwellings. Above this space the upper volumes of the dwellings protrude, separated only by small screens.



i



Cross section



Prof. Friedrich + Partner,
Hamburg
Altenpflegeheim Sangerhausen

Sangerhausen, Germany

This old-age home was designed as a small city, with streets, squares, and gardens, as well as a few characteristic nerve centers encompassing a range of services (restaurants, shops, a hairdressing salon) on the ground floor and private areas (dwellings, doctors' offices and so forth) on the upper floors or on the floors facing the garden to the south - the only difference being that this "small city" had to be architectonically synthesized into a single building.

First, an old building with prefabricated panels had to be integrated into the complex; and a new social space for residents was created in a garden area. The new three-story building is aligned with the existing residence, thereby comprising a "street façade". It is a low volume, the design having placed more importance on ensuring that residents have greater access to the street level and garden than they would have had if the five floors of the old building surrounding the new one had been retained.

On the ground floor, in addition to the reception, restaurant, kitchen and hairstyling salon, there is a day center to the south and the administration offices are located at the entrance. A stairway leads to the medical center, which surrounds a small garden, the "rose garden". The natural light which bathes the medical center means not only a saving in energy, but also, a simpler orientation for residents within the building, thanks to the visual reference supplied by being able to see the exterior at all times.

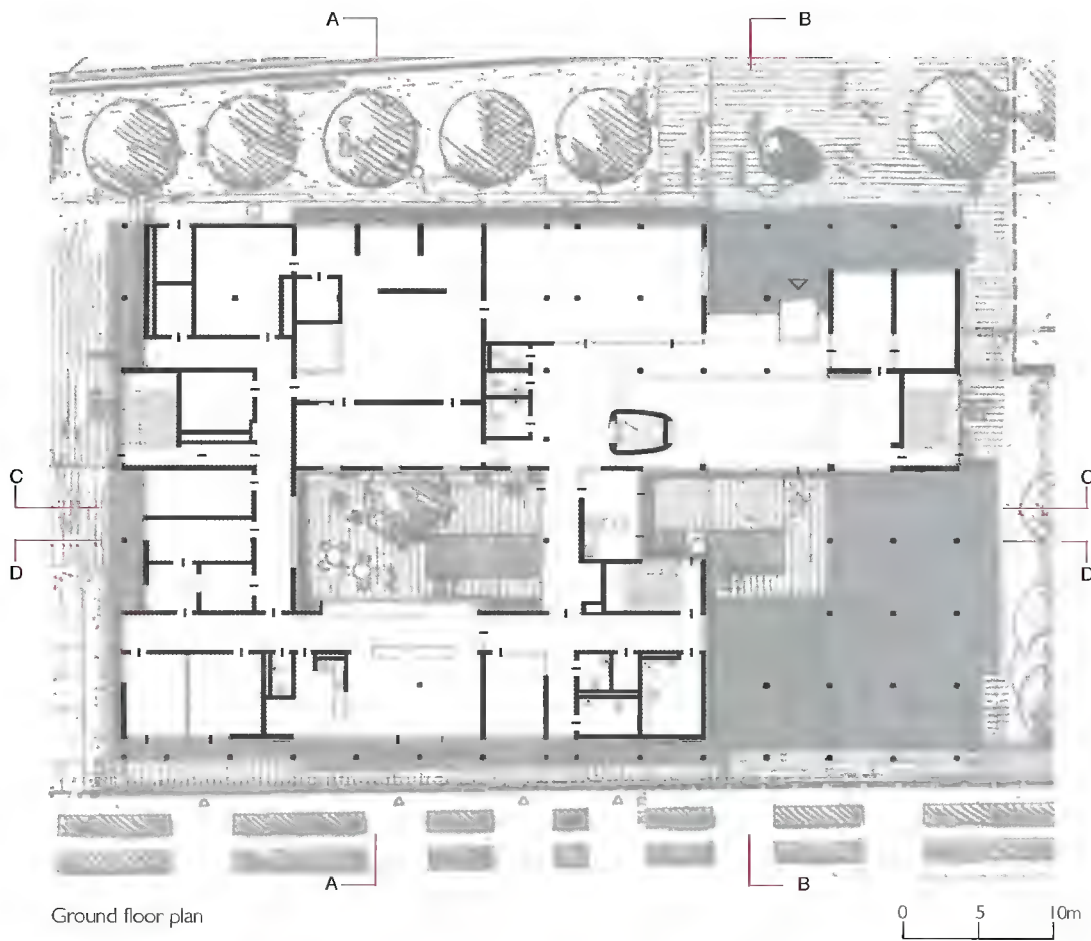
The loading/unloading area and visitors' parking lot are located behind the complex and surrounded by trees. An underground service corridor resolves the connection to the old building in a simple, economical and functional manner.

Leaving the residence's entryway behind, the visitor can contemplate the "green center" from a covered terrace, which is sheltered from inclement weather. Crossing an intermediate terrace and after a few paces, the visitor reaches the "new center". This center, lying between the old building -the "social wing" dedicated to medical care- and the new residence, constitutes the new social space which has been integrated into the garden.

Photographs: Klaus Frahm / Artur



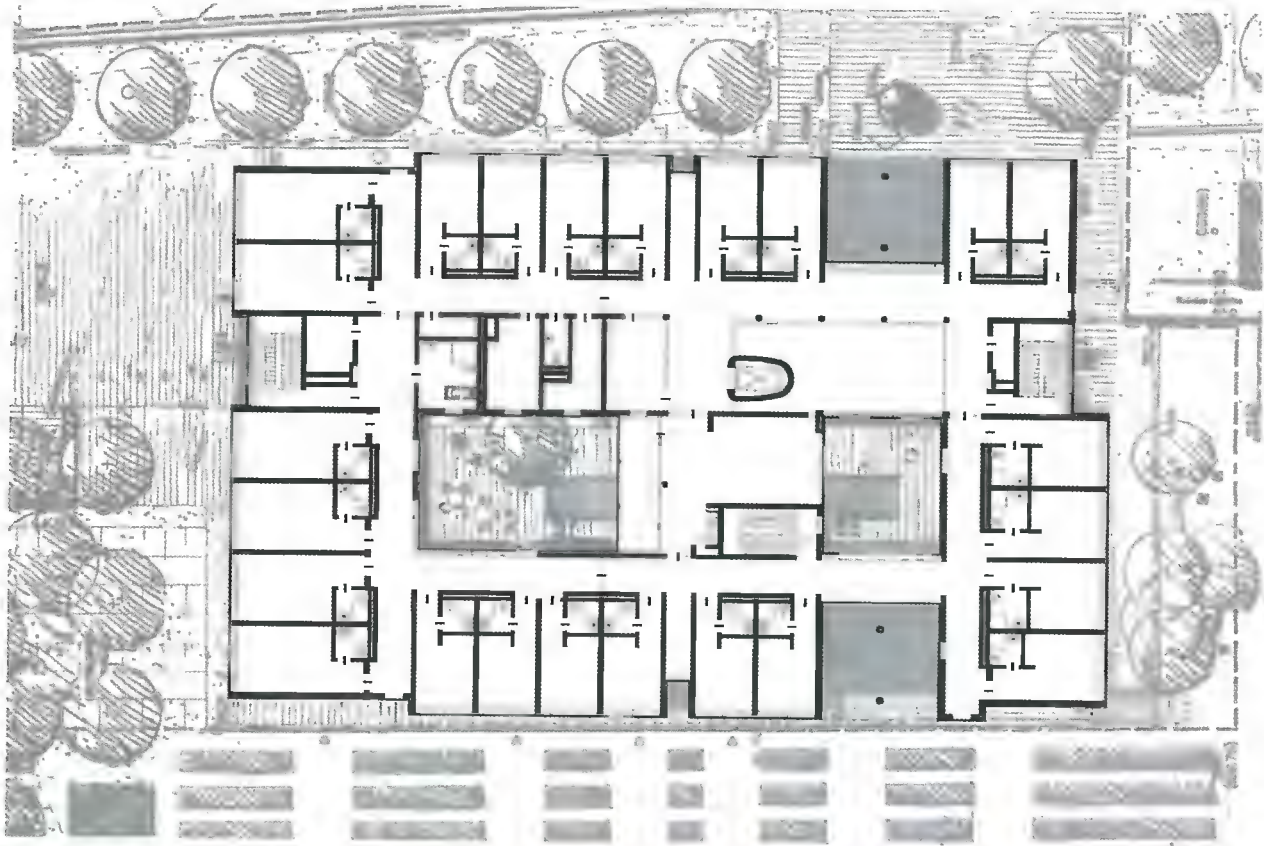




The "nerve centers" have been placed in the entrances to the various care units, where the communal areas are located. Widened sections in the corridors provide a place to sit and rest; and, in each unit, the balconies have been grouped together.



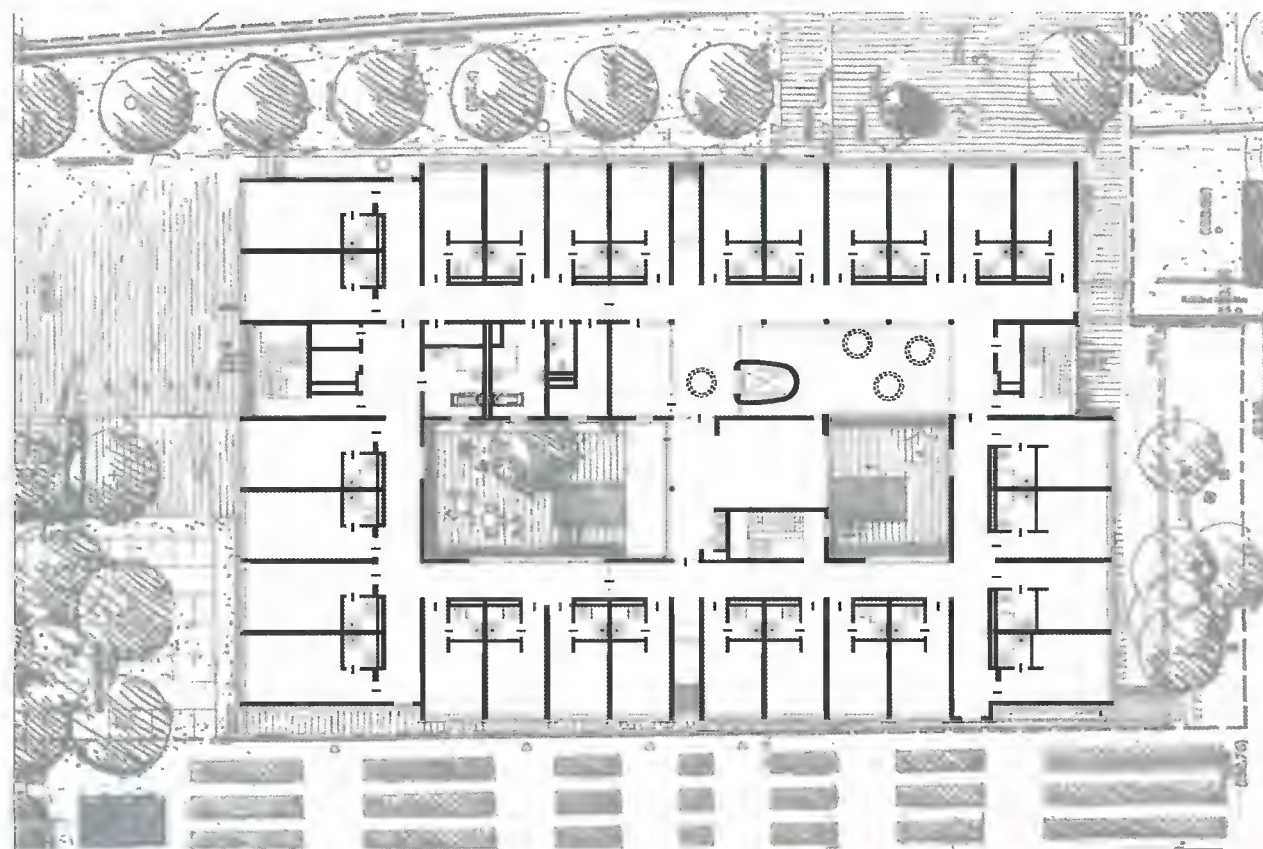




First Floor Plan

0 5 10m





0 5 10m

Second floor plan









Section A-A



Section B-B





Section C-C



Section D-D



Wingårdh Arkitektkontor AB *Kajplats 01*

Västra hamnen, Malmö, Sweden

Wingårdh's apartment buildings for Malmö's local authority housing company, MKB, at the Housing Exhibition have been built to last hundreds of years. This necessitated the use of reliable and well proven materials, robust building techniques, "generally" planned rooms and a design that is intended to withstand ever-changing trends.

The starting point for the Exhibition was the observation of people's need for variation, which, together with the windswept location in the old docks to the west of the city, led its architectural planner, Klas Tham, to design a plan with a large number of angles and sheltered spots.

The sea-side facade, where Wingårdh's blocks are located, is higher than the buildings behind it, thereby providing the area with a wind barrier. Kajplats 01 consists of a five story block with two apartments (primarily duplex) per floor. These dwellings are easily identified by the size of their external openings. Another three story volume with an attic level forms an angle at one of the ends of the block; while, on the other side of the garden at the back, there is a long, two-home building with "greenhouses" -- glass boxes with various strains of moss growing between the two panes of glass.

The shadows of the voids set back from the facade of the lower floors provide a counterpoint to the uniform facades of the long building, just as the orthogonal geometry of the units as a whole contrasts with the gardened circular gallery created between them.

Photographs: Åke E: son Lindman







Large windows bring optimal natural light into the apartments. The variation on the elevations appears to be greater than the plan's simple a-b-a-b-a rhythm.

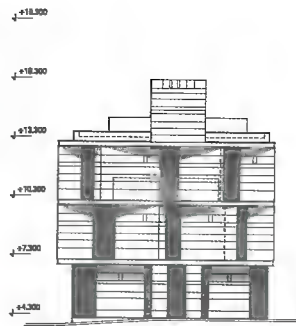
Site plan



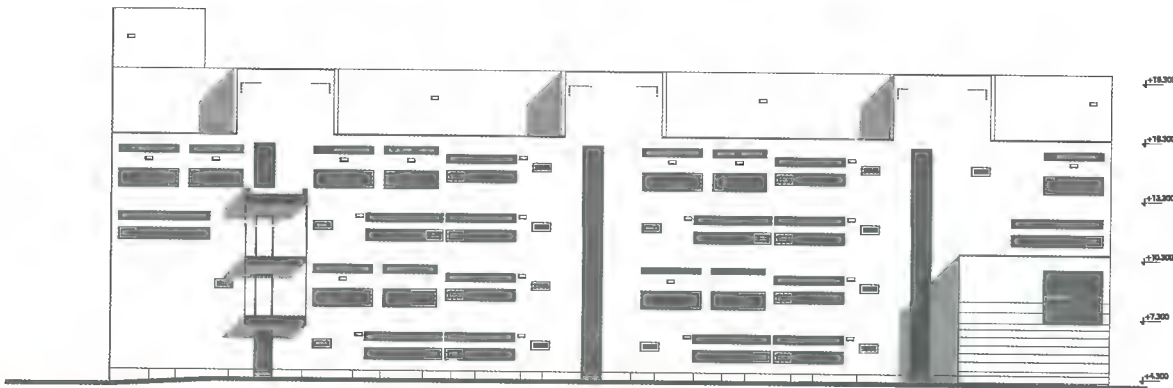




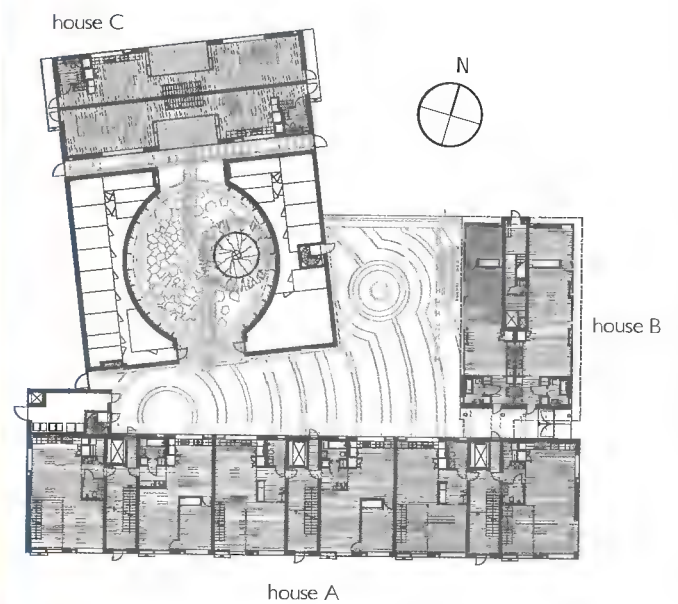
East elevation house A & B



North elevation house B



North elevation house A

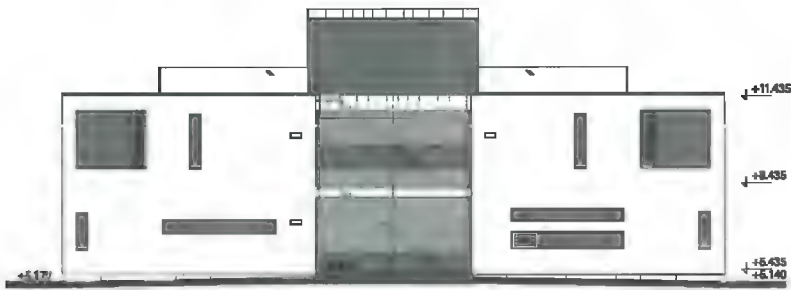




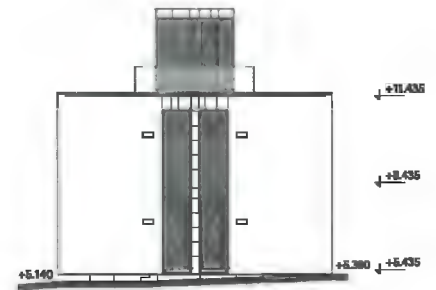
West elevation house B



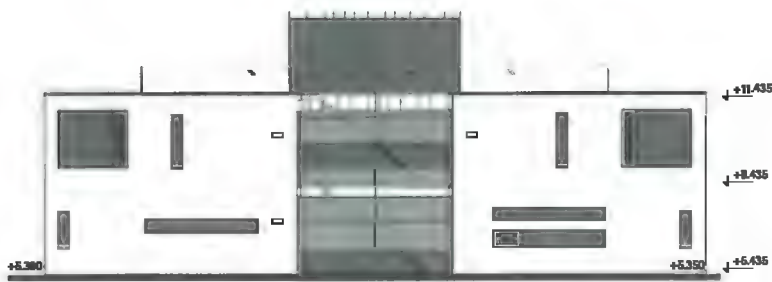
West elevation house A



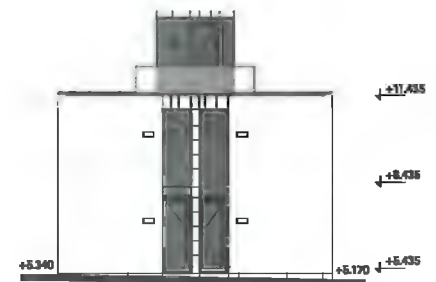
South elevation house C



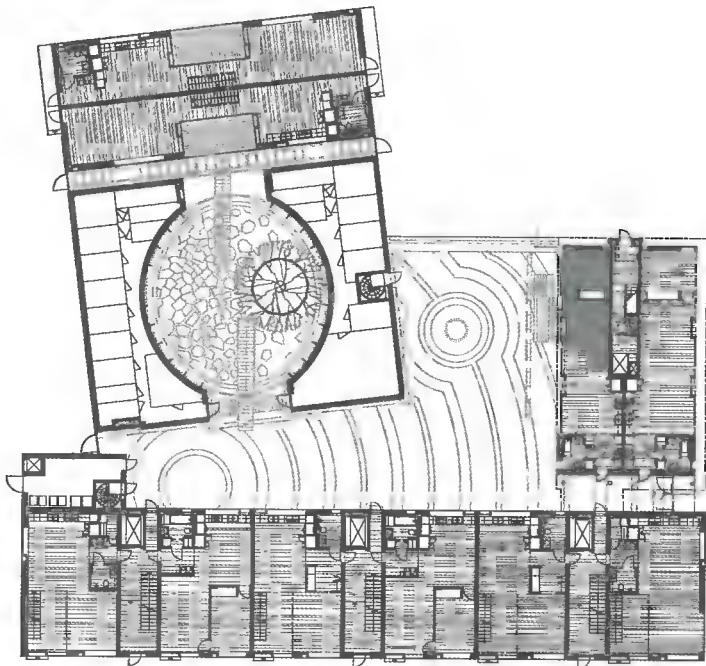
West elevation house C



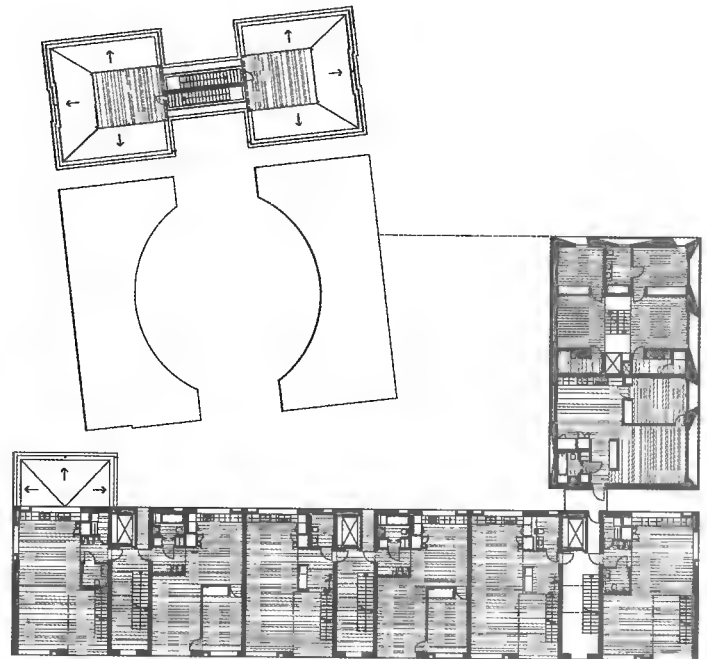
North elevation house C



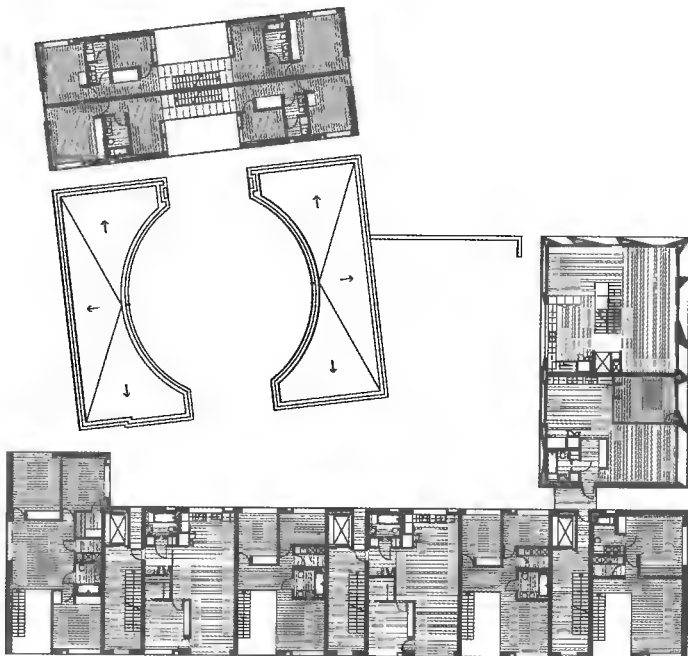
East elevation house C



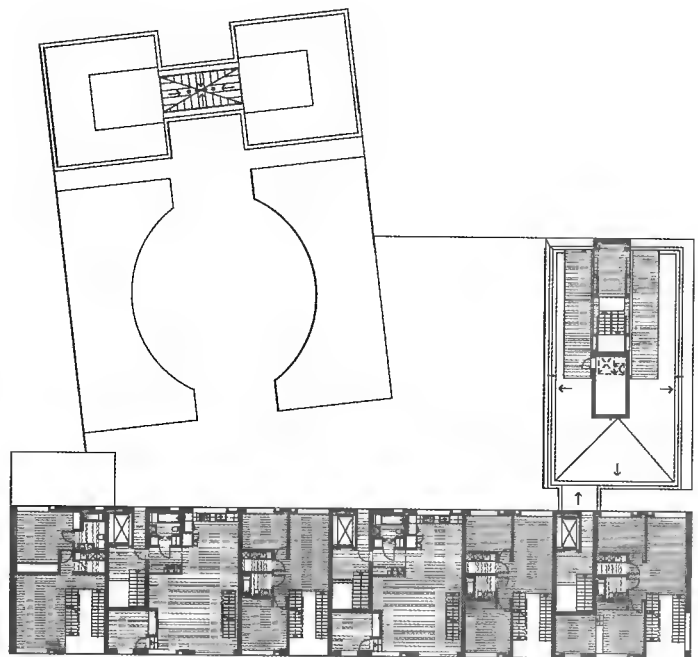
Ground floor plan



Second floor plan



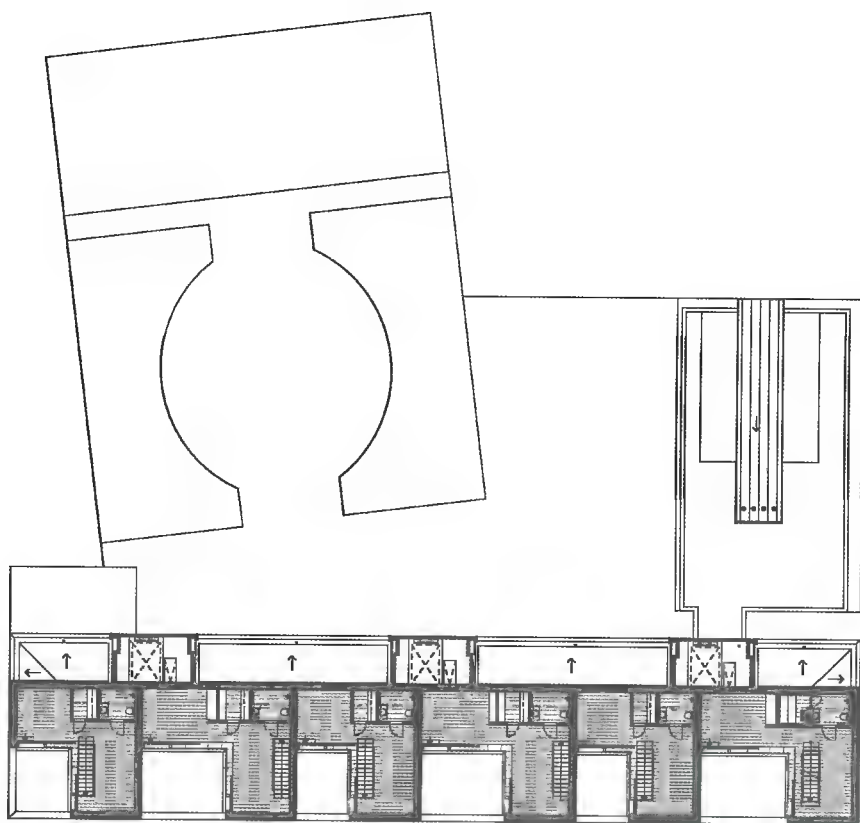
First floor plan



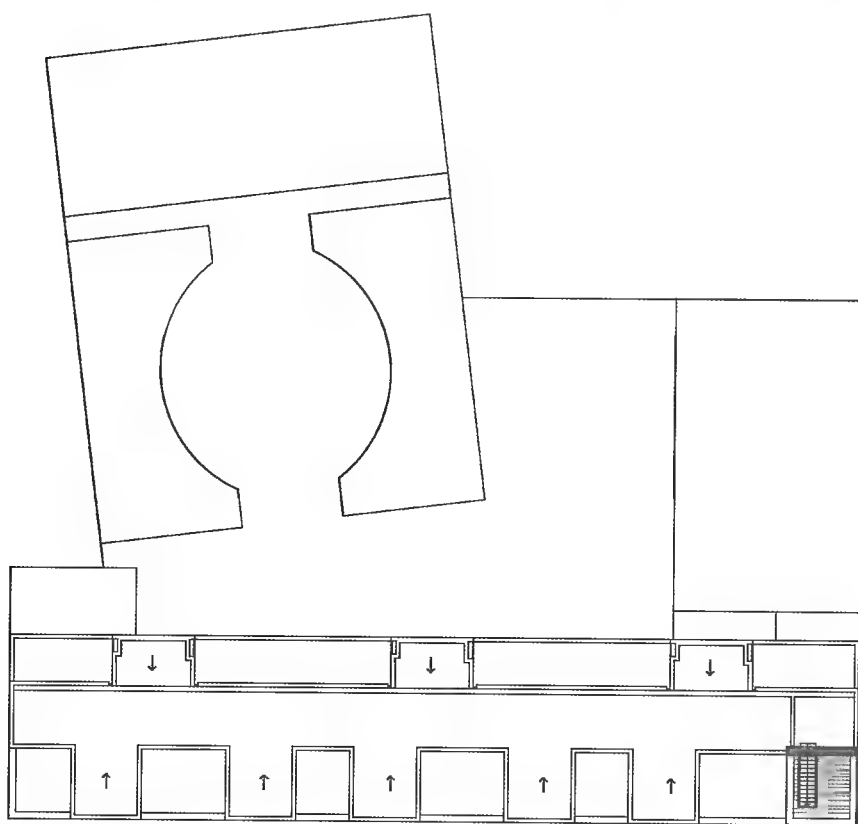
Third floor plan



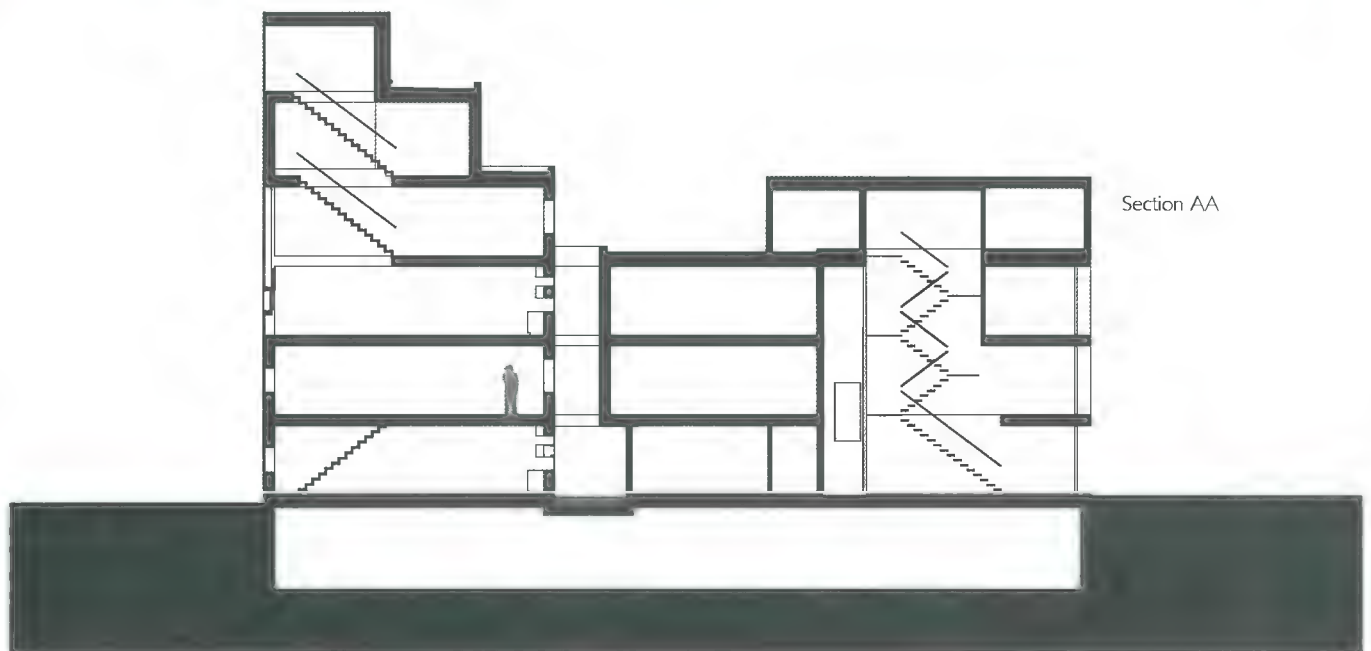
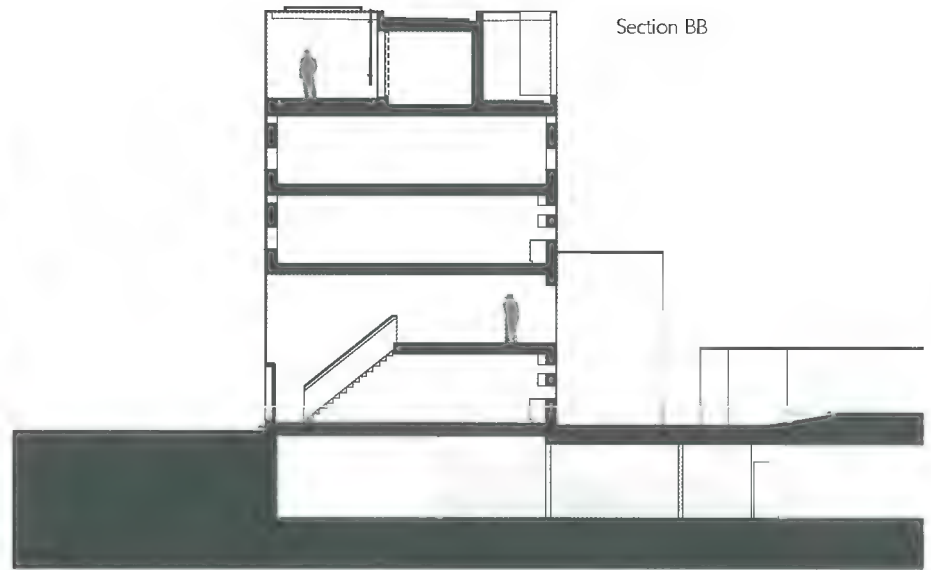
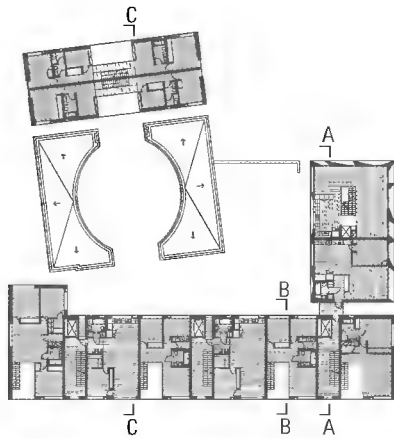
After implementation of the neighborhood's general plan, the project has been fragmented into three distinct volumes: a tall, sea-side block which shields the rest of the buildings and two excavated volumes with greenhouses and terraces.

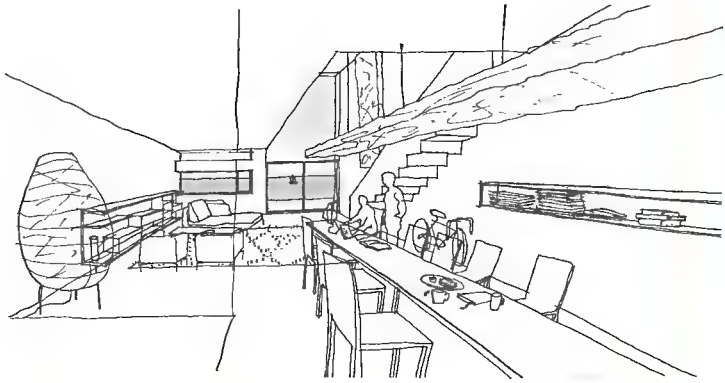


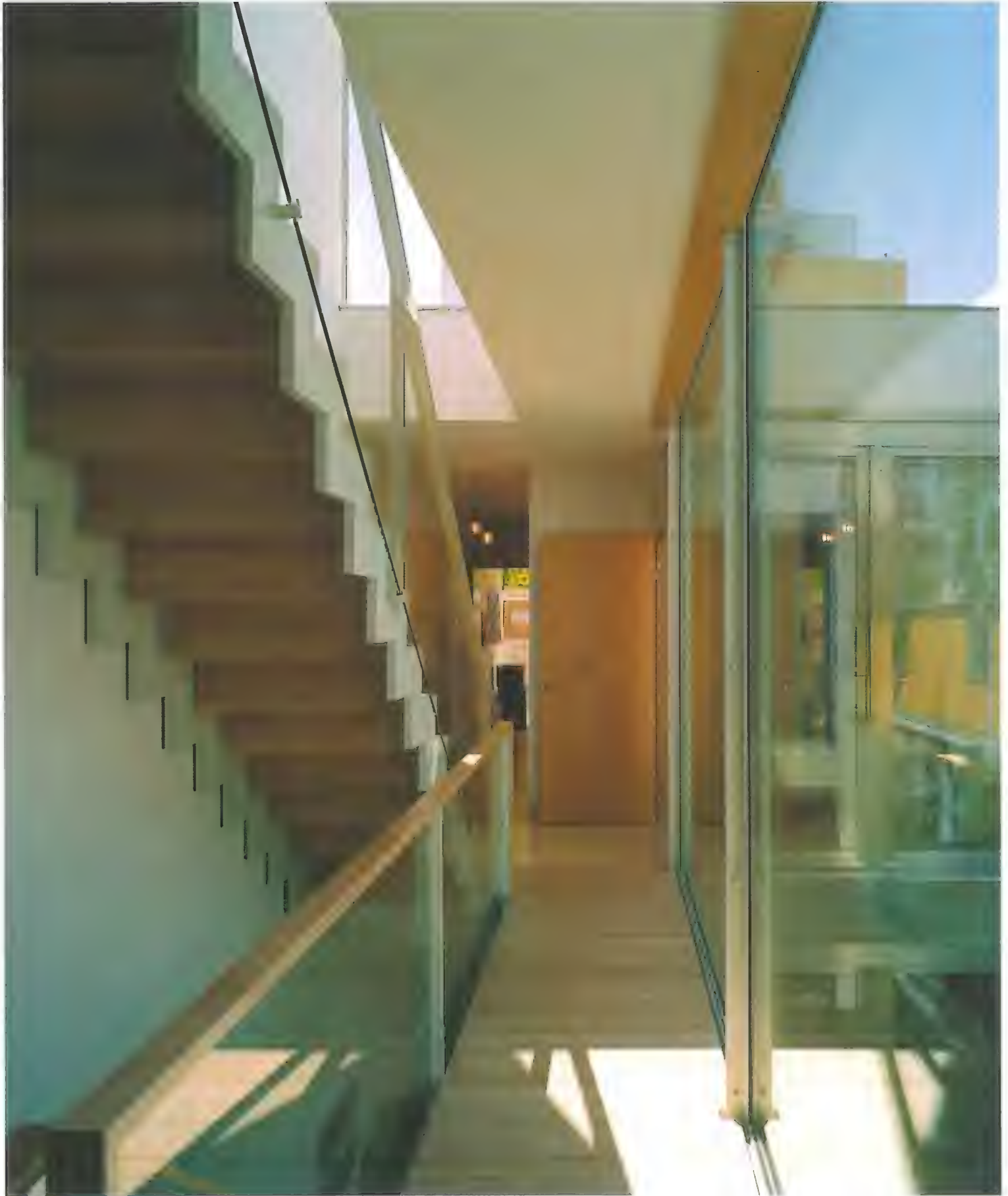
Fourth floor plan

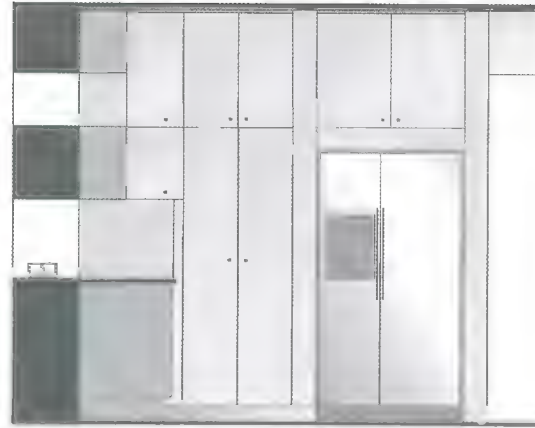
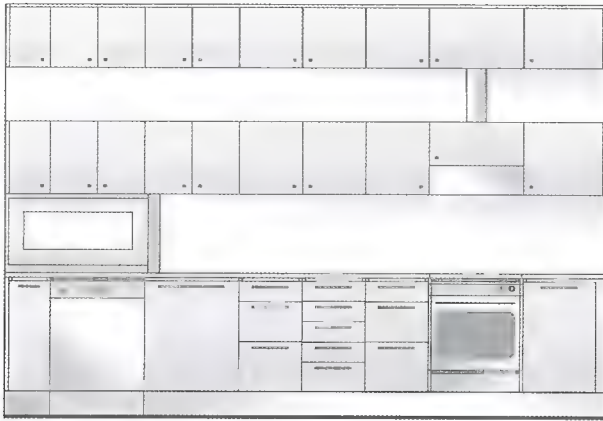


Fifth floor plan

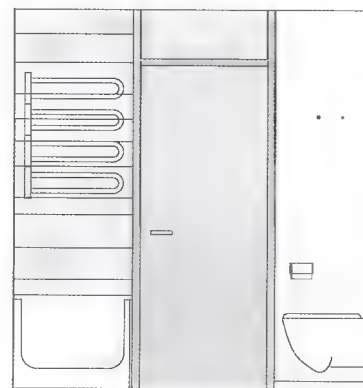
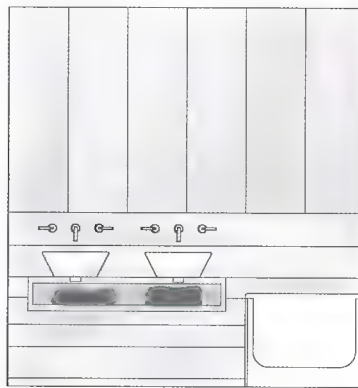




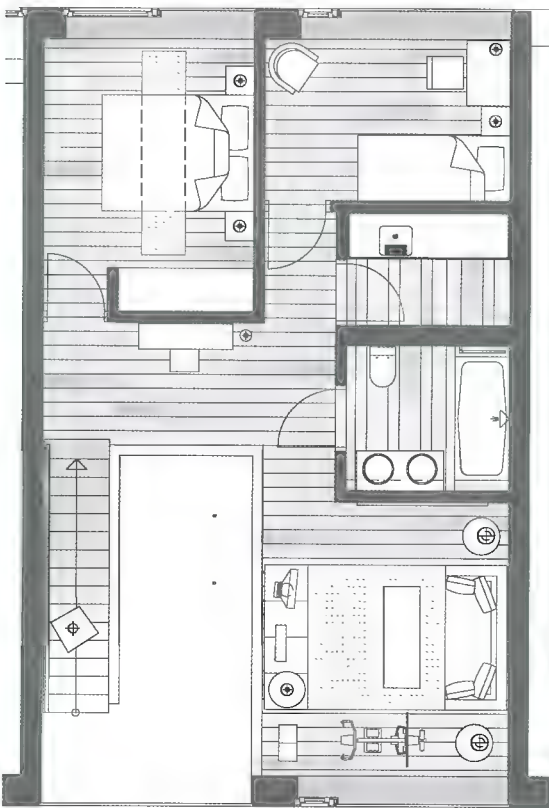




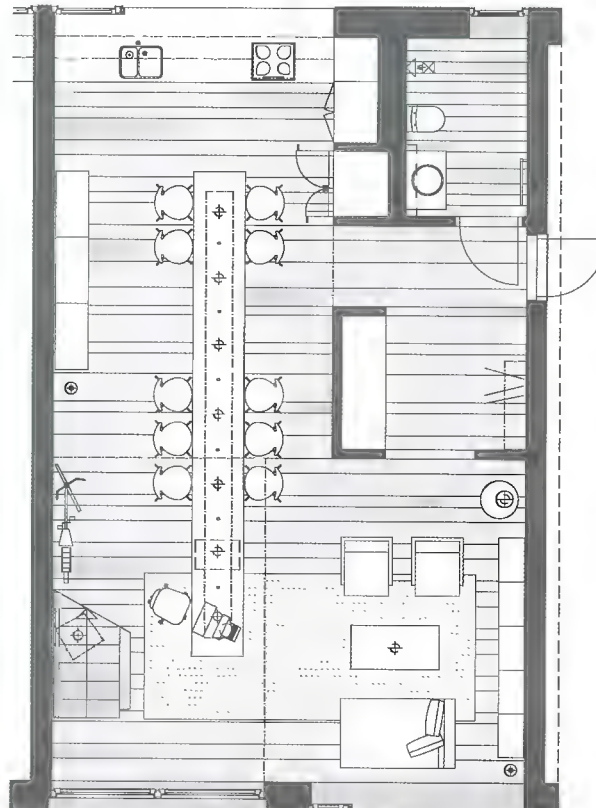
Kitchen elevations



Bathroom elevations



Standard dwelling plan, 1st floor, House A



Standard dwelling plan, ground floor, House A



Fink + Jocher *Solar House*

Coburg, Germany

The architectural team's objective in this project was to develop a type of integrated building that would use energy-saving features. The result would not only be a thermally insulated building, but also an economical construction ready to be occupied by inhabitants with an ecologic conscience.

During the planning phase different concepts were considered in terms of building costs and maintenance. Despite the differences, the team decided upon a 4-story block. The coordination of the different elements was especially important, particularly for the transparent surfaces which bring natural sunlight into the homes, and for the interior fixtures themselves that would liberate this solar energy later on. Thus, substance and dimension were combined, with the efficiency of the resources used to meet the energy requirements.

This building combines construction measures with an unconventional project concept, where a double orientation is clearly visible.

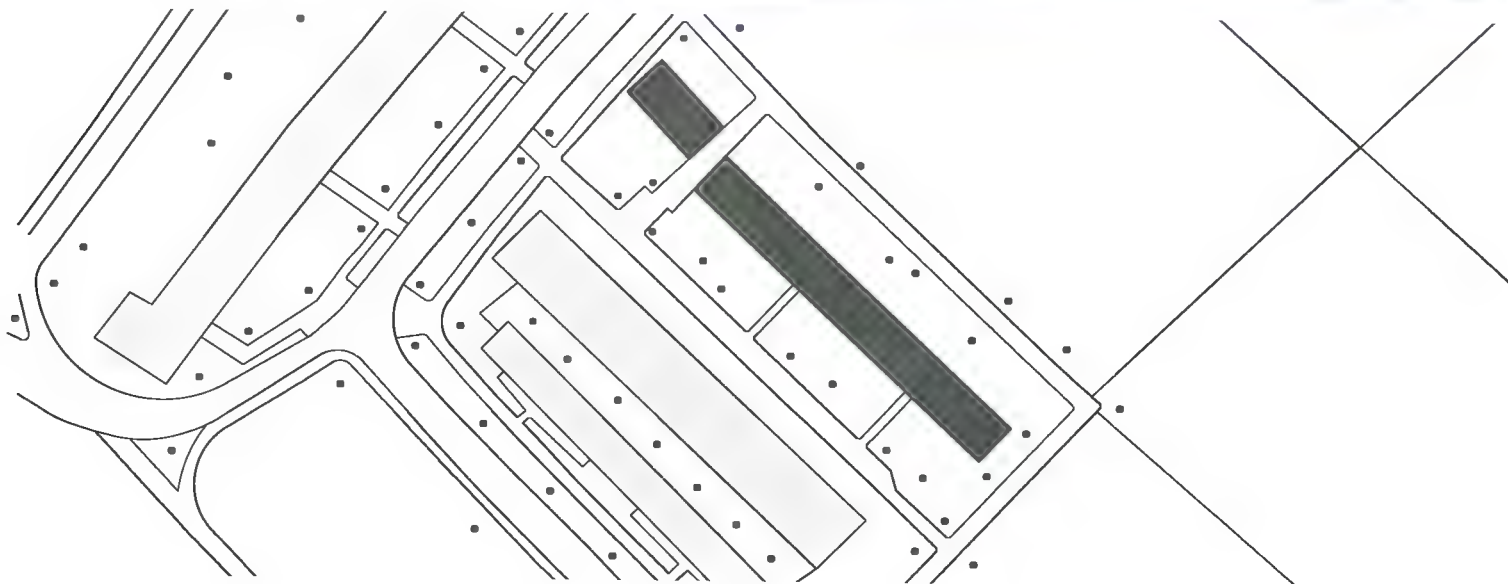
Transparent thermal insulation (TWD) on the south side of the building is combined with 8 cm translucent panels, which capture and store solar radiation for subsequent distribution.

These panels are made up of water pipes that provide heat from the previously stored energy. The non-transparent surfaces also play a very important role in thermal insulation.

On the north side, 24 cm-wide openings in the wall have been fitted with shutters which are red on the outside (to absorb sunlight) and silver on the inside panel, to reflect the light towards the interior of the house, thereby favoring temporary thermal insulation. This allows an internal differentiation of the building according to heat zones: dwellings (permanent heat), stairway shaft (changing hot/cold), basement (permanent cold). Color plays a central role in this project as well: bold tones with high saturation levels were chosen in order to harness more energy.



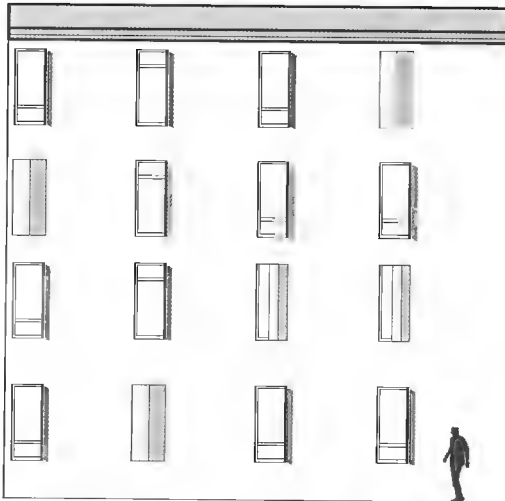
Photographs: Fink + Jocher, Klaus Kinold



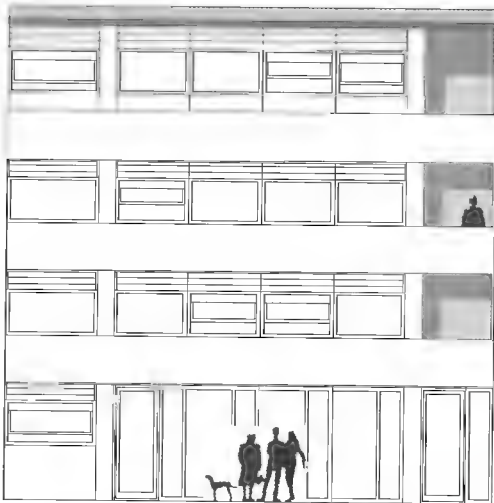




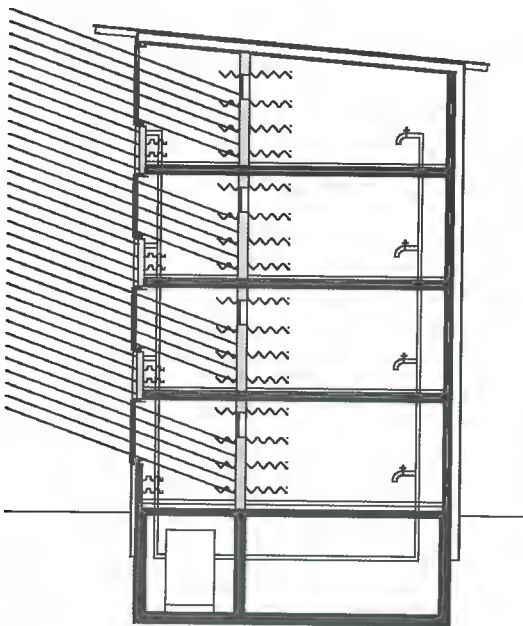




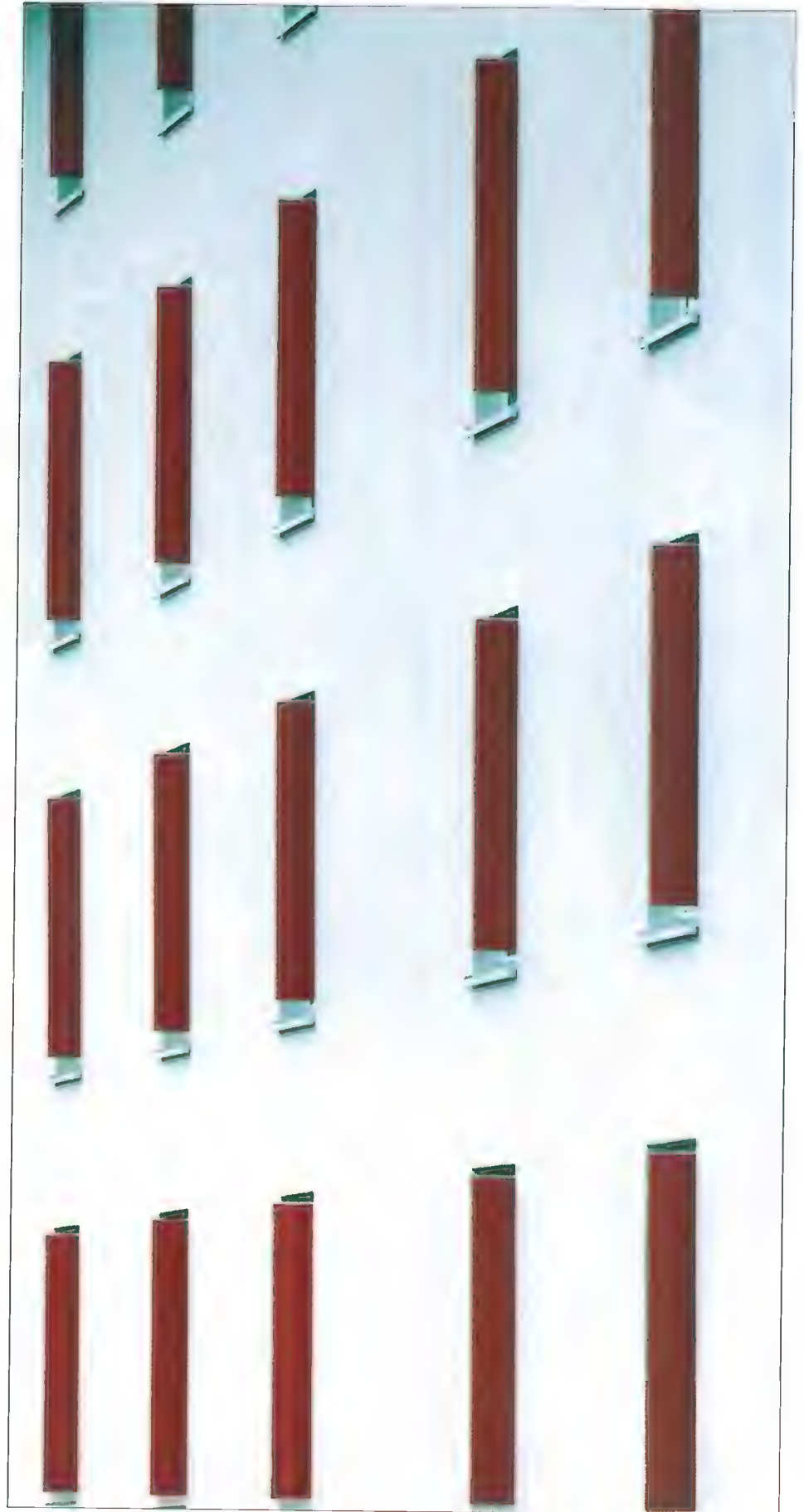
Elevation North East

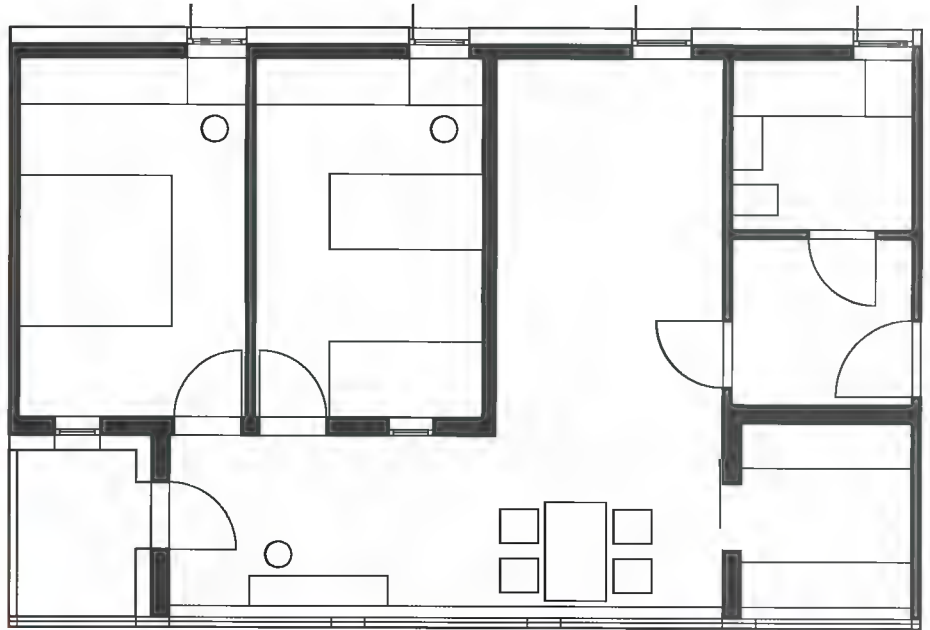


Elevation South West



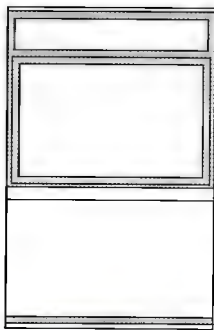
Cross section



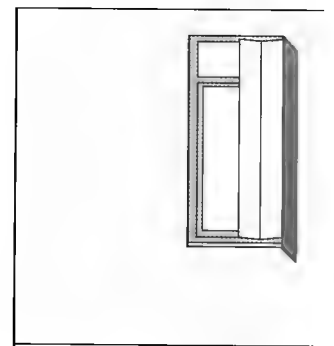
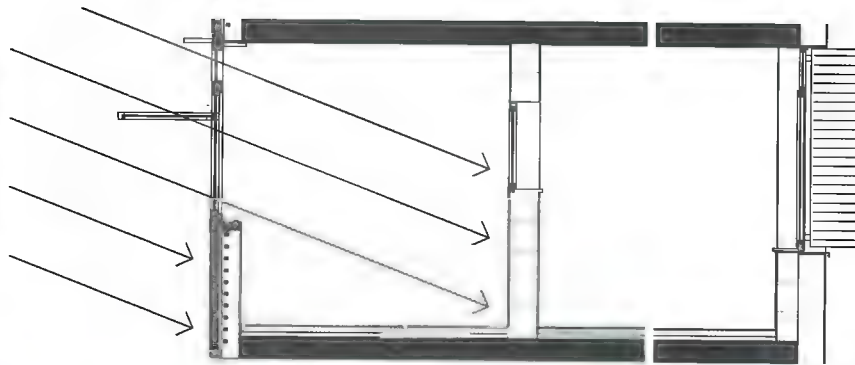


Ground floor plan





Energy scheme



The folding storm windows on the north side of the building are designed to capture sunlight and reflect it towards the inside of the house, favoring temporary thermal insulation.



Helin & Co Architects

Sandels, housing for senior citizens

Helsinki, Finland

A site bordering the outskirts of the Hesperia Hospital grounds in Helsinki has proven to be an excellent location for senior citizen housing. A variety of services are in the nearby vicinity, a park lies adjacent to the site, and the street environment is peaceful. An additional unique feature of the setting is the row of architecturally valuable buildings, built at the beginning of the 1930's, lining the east side of the street.

The new building, consisting of 88 dwellings, most of which are two- or one-room flats, has been inserted into the streetscape to form a dialogue: it is lower than the multi-story buildings opposite and set back somewhat from the street line. The architectural expression is a conscious representation of modern-day design, while also taking the valuable setting into account.

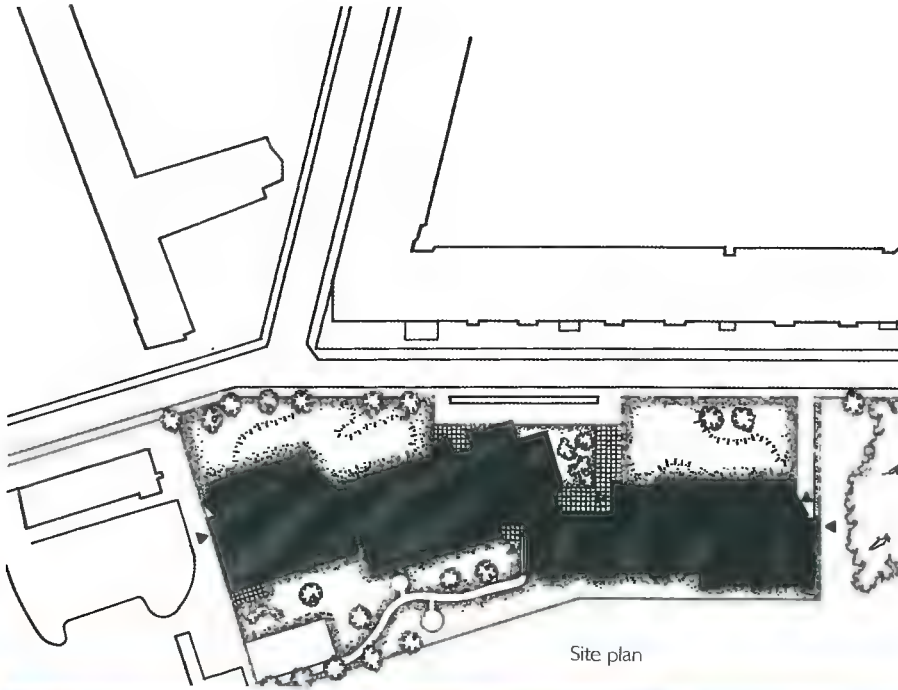
Extensive use of wide expanses of glass brings abundant natural light into the living quarters. The solid parts of the facades are comprised of rendered and painted insulating building blocks. Simple steel details converse across the street with the horizontal bands and simplified decorative motifs of the transition period between classicism and functionalism.

Service and club spaces and exercise, sauna and swimming pool facilities intended primarily for the residents have all been included. Although the overall look of the complex is more reminiscent of a modern apartment building than a residence for the elderly, all internal components have been designed for the needs of physically challenged people, and allowance has been made for the gradual introduction of specialized equipment, depending on the individual needs of the residents.

Photographs: Titta Lumio







The site, located on a quiet street next to a park with walking paths, has proven to be especially suitable for a residence for the elderly. Wide expanses of glass bring abundant natural light into the homes, while also granting the complex an elegant, modern air - a look heightened by simple steel details on the facades.



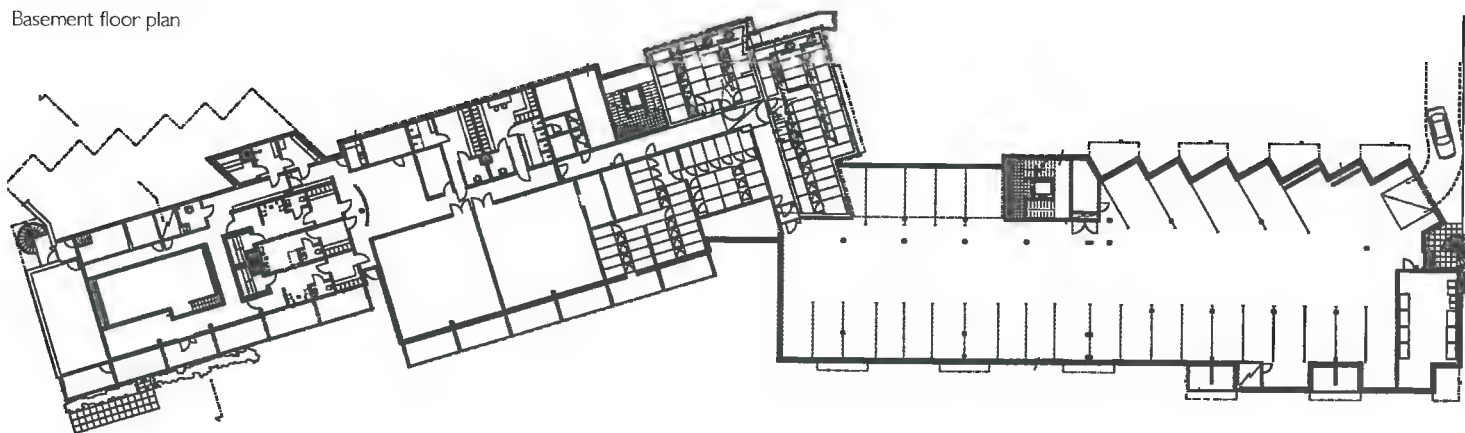




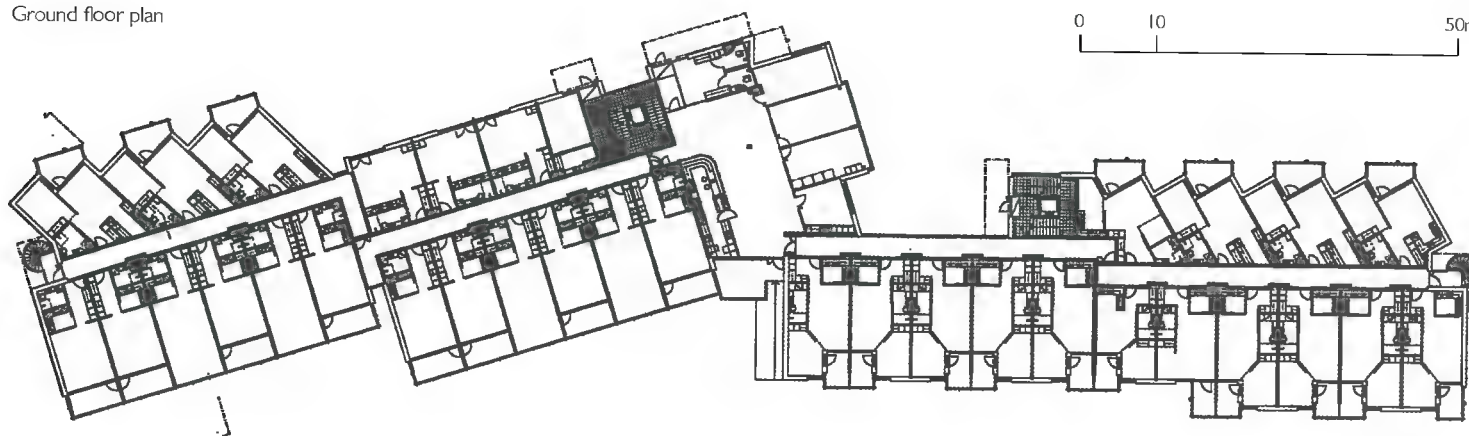


The solid parts of the facades are comprised of rendered and painted insulating building blocks. The complex is made up of 88 dwellings, most of which are two- or one-room flats, and all of which have been especially designed with the needs of physically challenged people in mind.

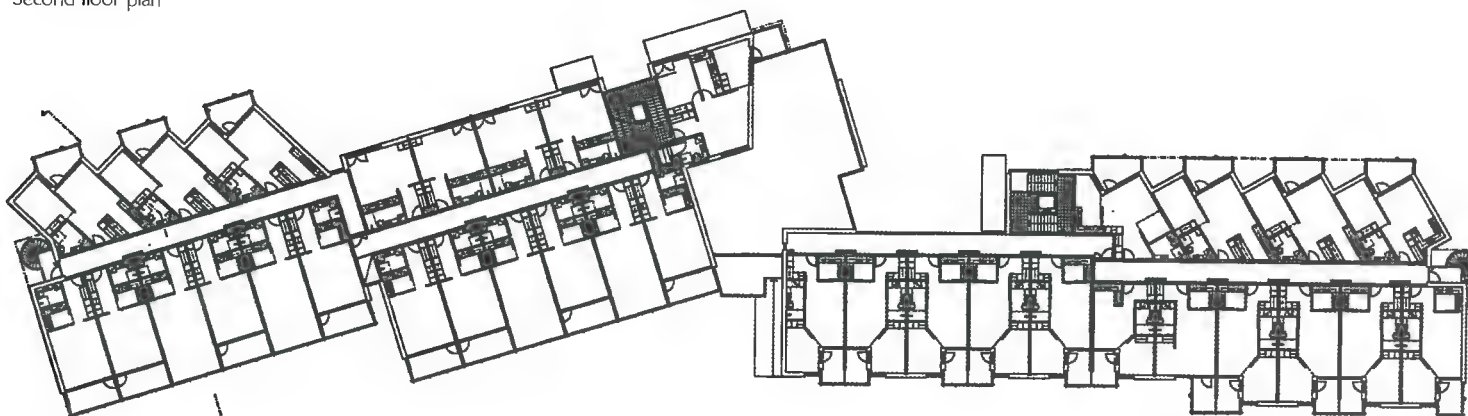
Basement floor plan

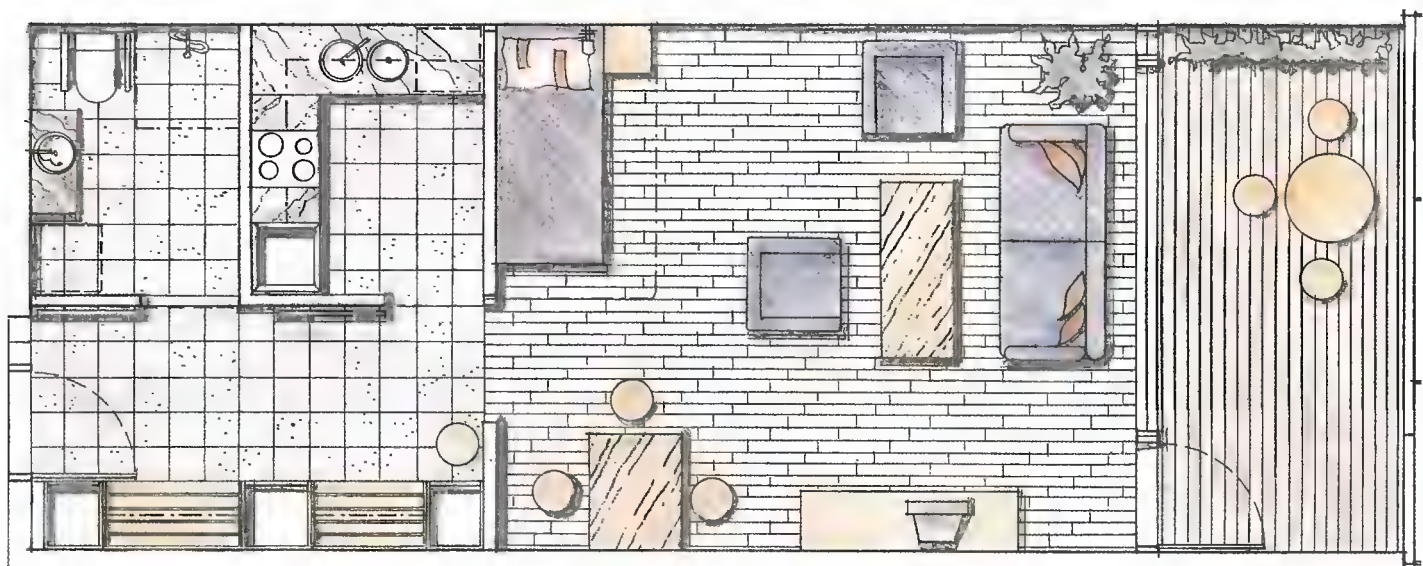
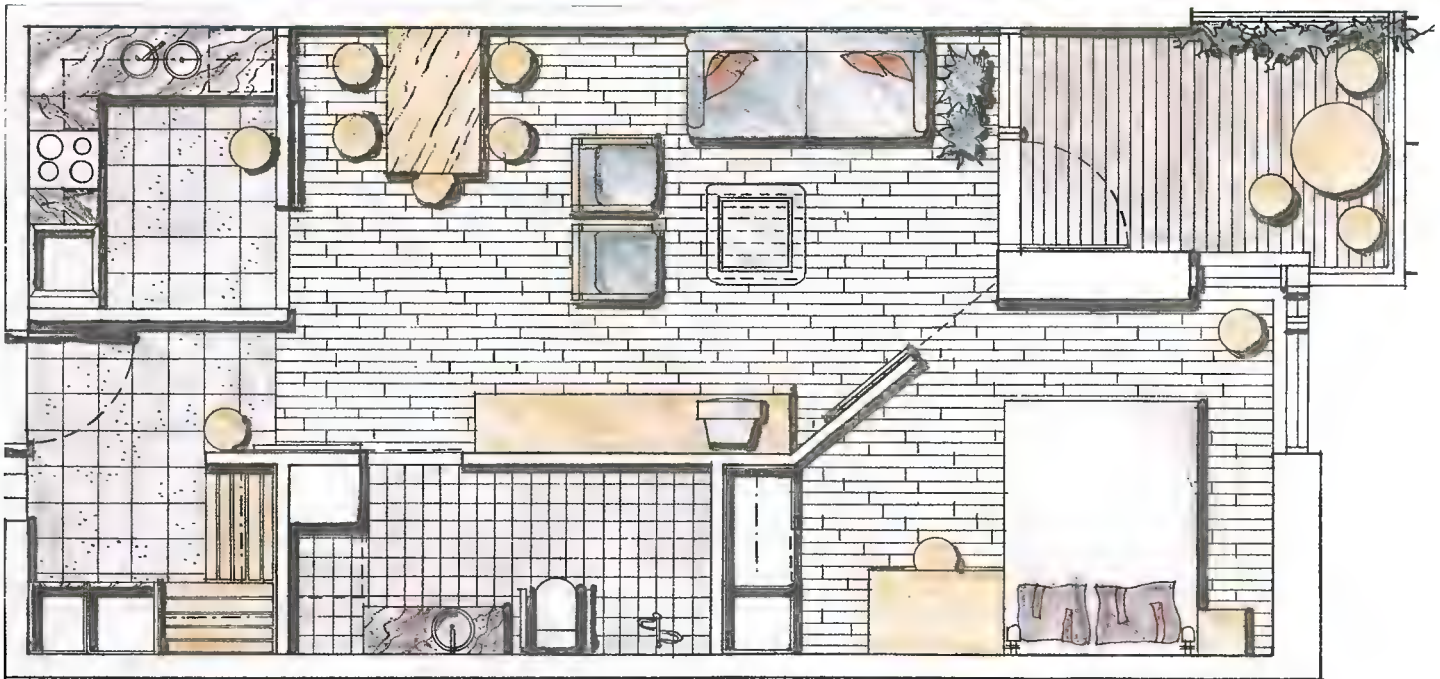


Ground floor plan

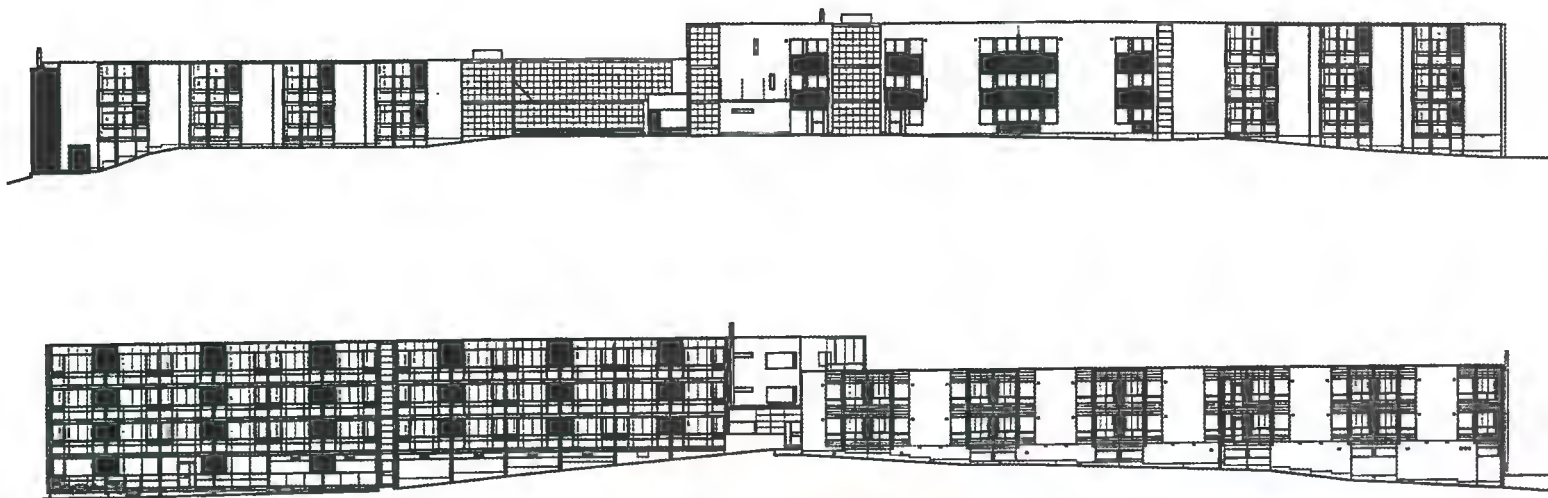


Second floor plan

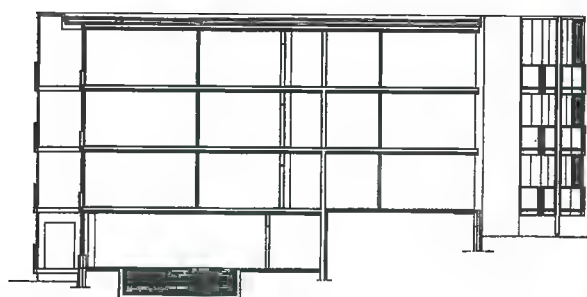




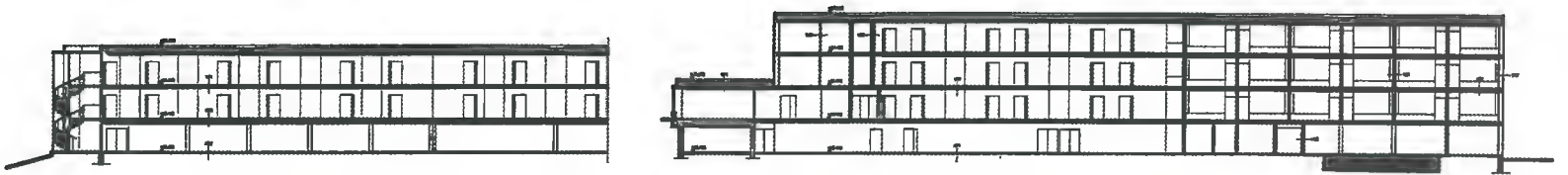
Apartments module



Elevations



Cross section



Longitudinal section



Jacques Schär & Christine Sjöstedt *Dwelling complex El Masr*

Cologne, Switzerland

This dwelling complex is located in Cologne, on the original land belonging to the El Masr castle, a Tudor-like building which dates from the end of the 19th century, and which is emblematic of the area.

In order to preserve the park linked to this residence, the building is located on the south-east border of the land, leaving room for views from the castle as well as from the apartments. The building follows the land's natural slope, and makes several successive level distinctions, bringing the building close to the scale of a private home or villa.

The notion of villa-building is equally present in the repartition of the apartments. Thus, on the ground floor, 4 large apartments open onto the private gardens towards the south-east. The 8 others are duplex style (on the first and second floors) with large terraces on two levels and fitting into the surrounding natural environment.

The base volume is a rectangle within which the architects have created terraces, double heights, and headers.

The work performed with this simple volume has been accentuated by the use of particular materials, such as Brazilian slate to surround the rectangular structure, and hemlock cladding for the retreating planes.

Although the building presents a non-repetitive facade for the 12 apartments, 8 of them have a different typology.

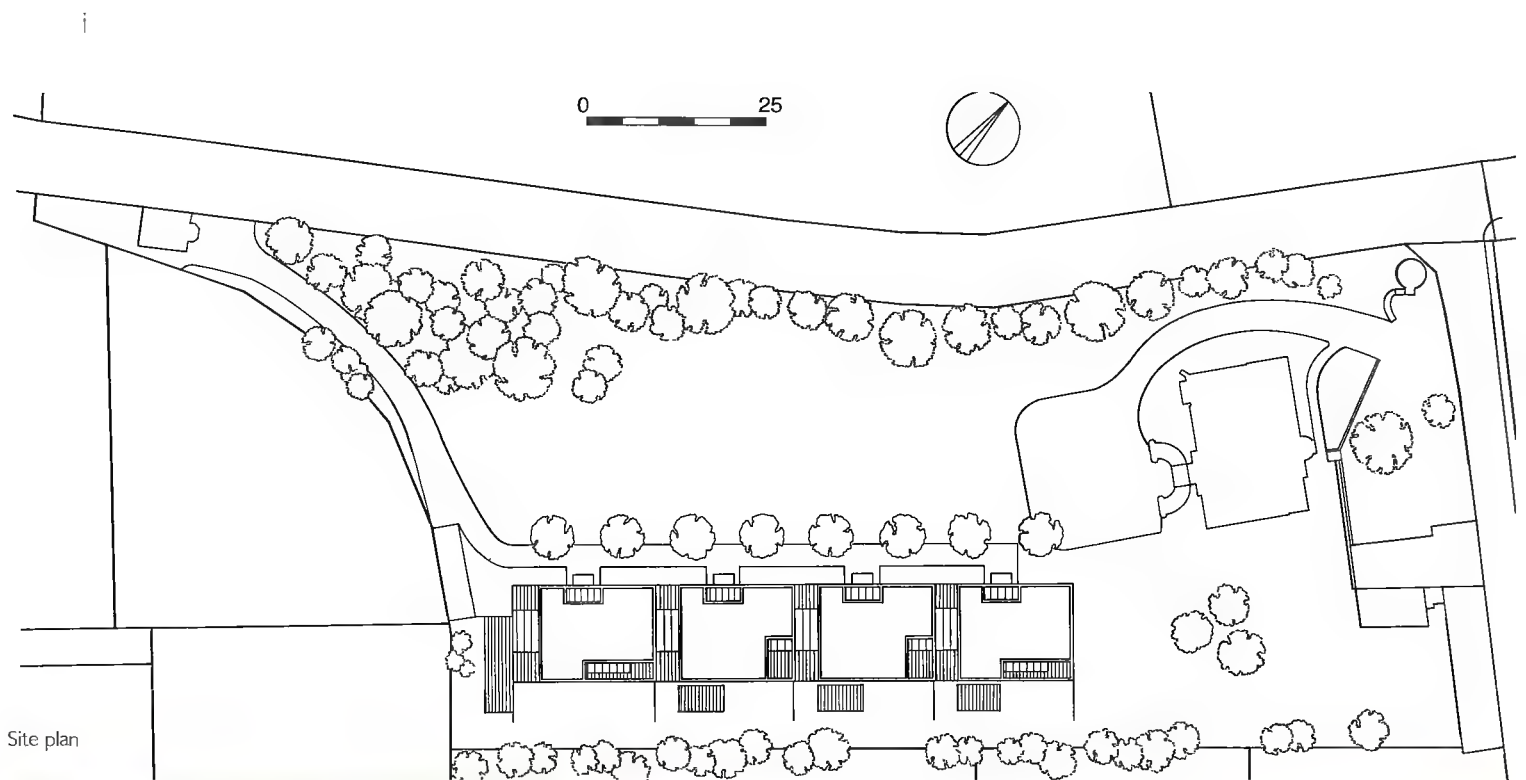
The living-rooms and libraries, located toward the south-east, have higher ceilings than the other rooms, and open onto the dining room and kitchen on the north-west, so that the "day-time" rooms can enjoy sunlight all day long.

The materials used for the interior are the same (Brazilian slate for the kitchen floors and bathrooms), or within the same color range (Oregon pine woodworks, parquet) as those used on the exterior, with the purpose of reinforcing the interior-exterior link.

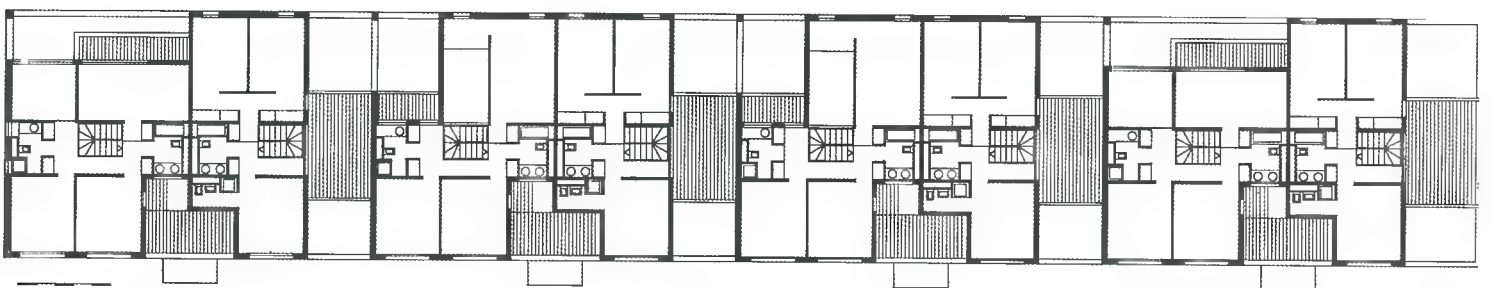
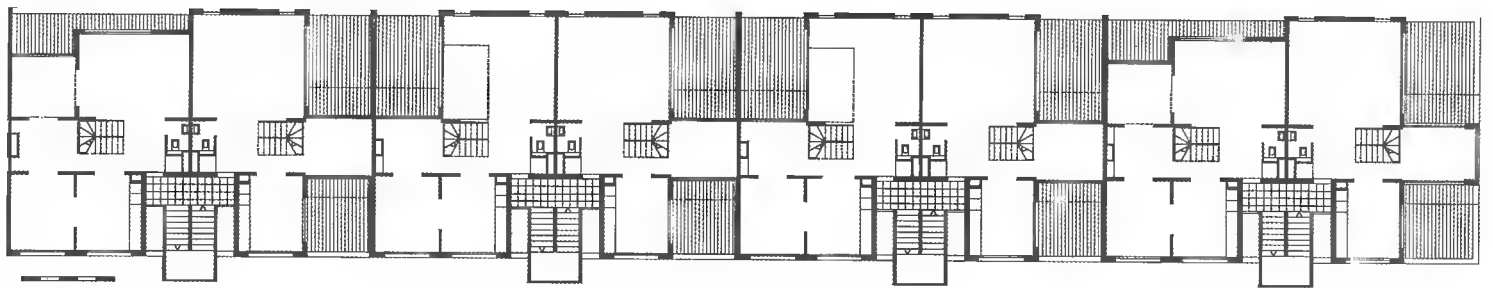
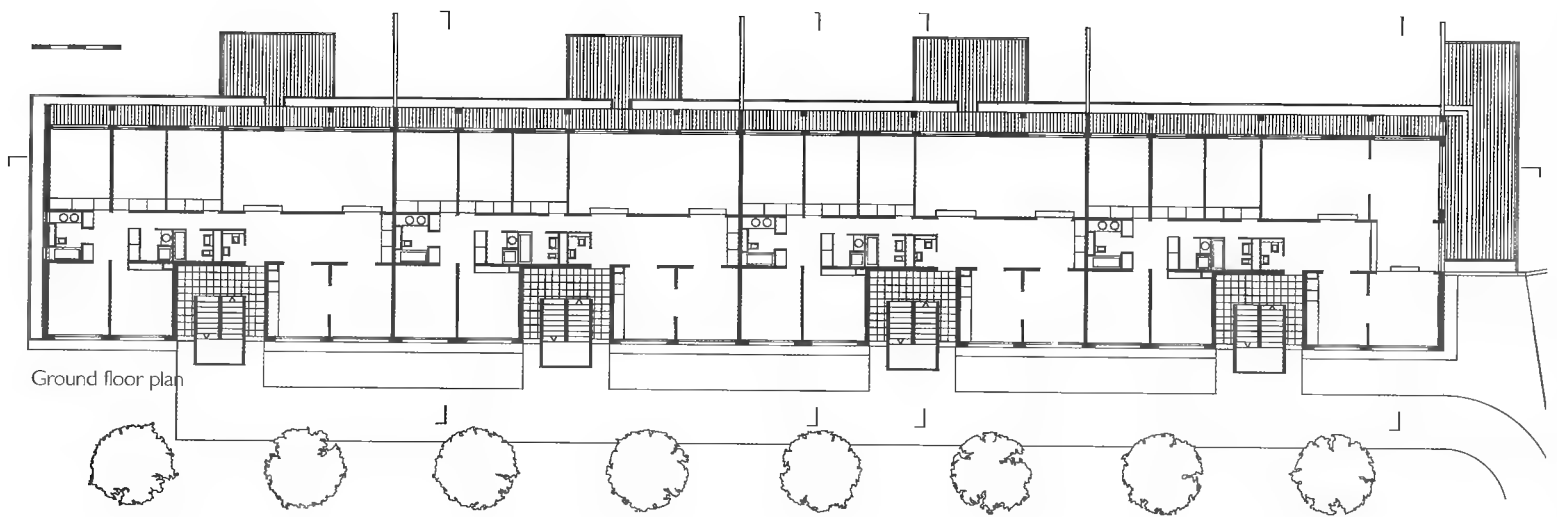
Photographs: Jean Michel Landecy



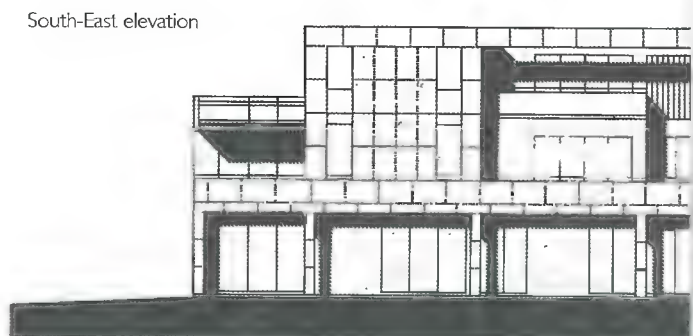
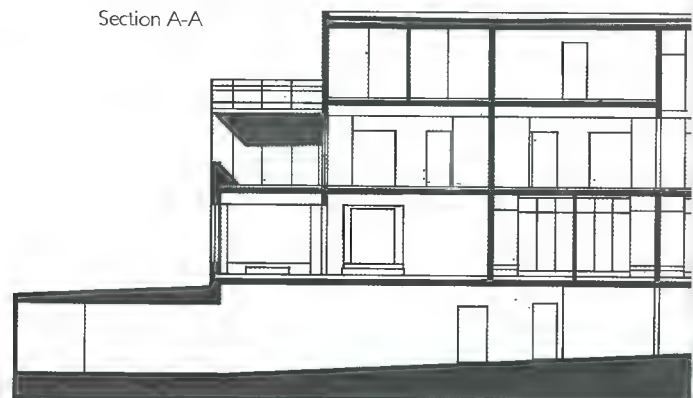
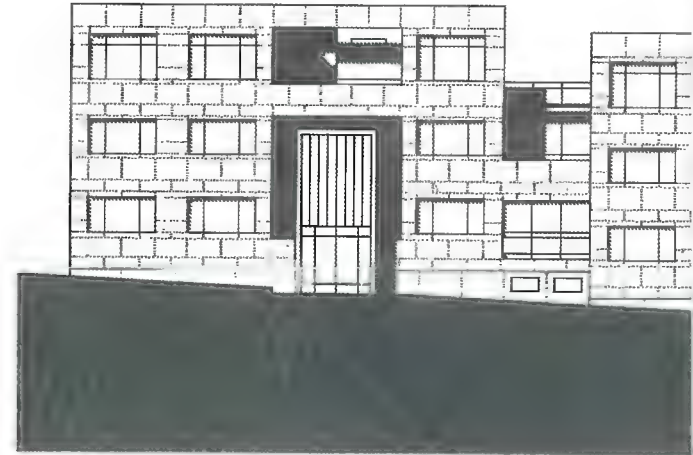
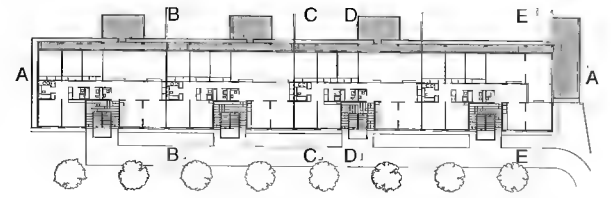
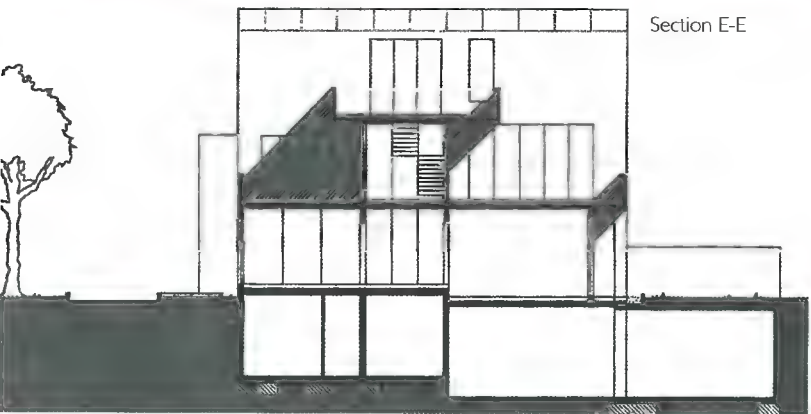
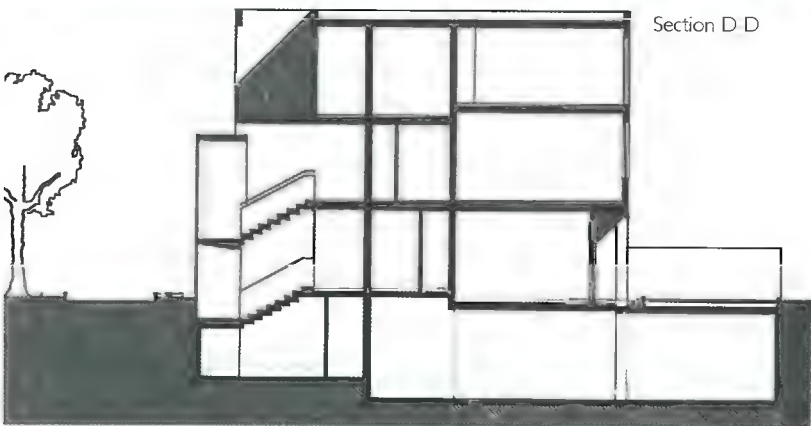
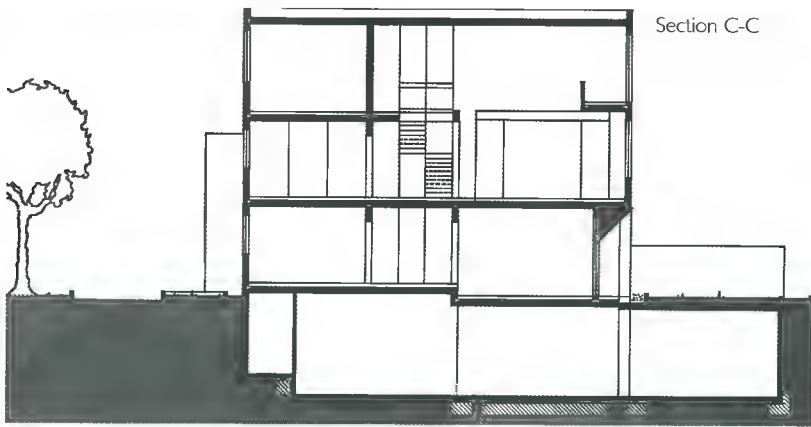
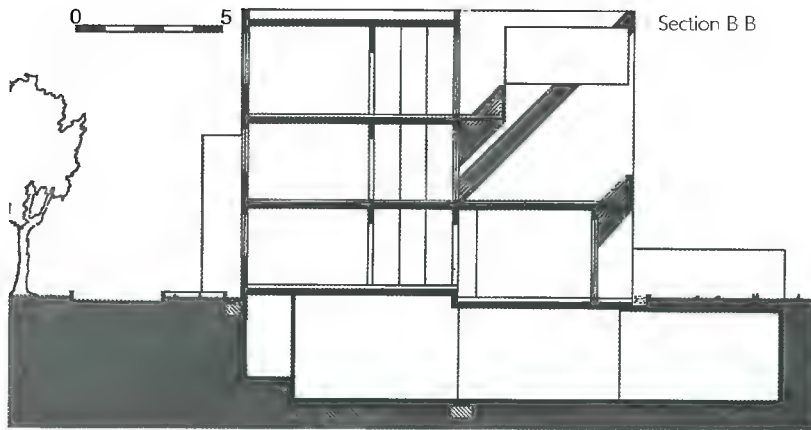




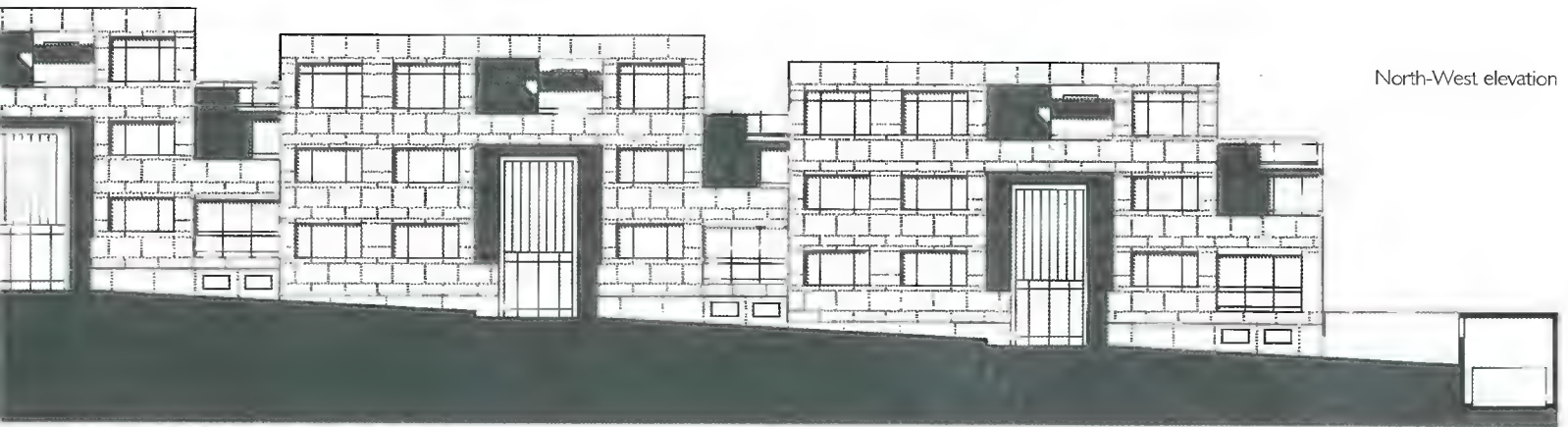




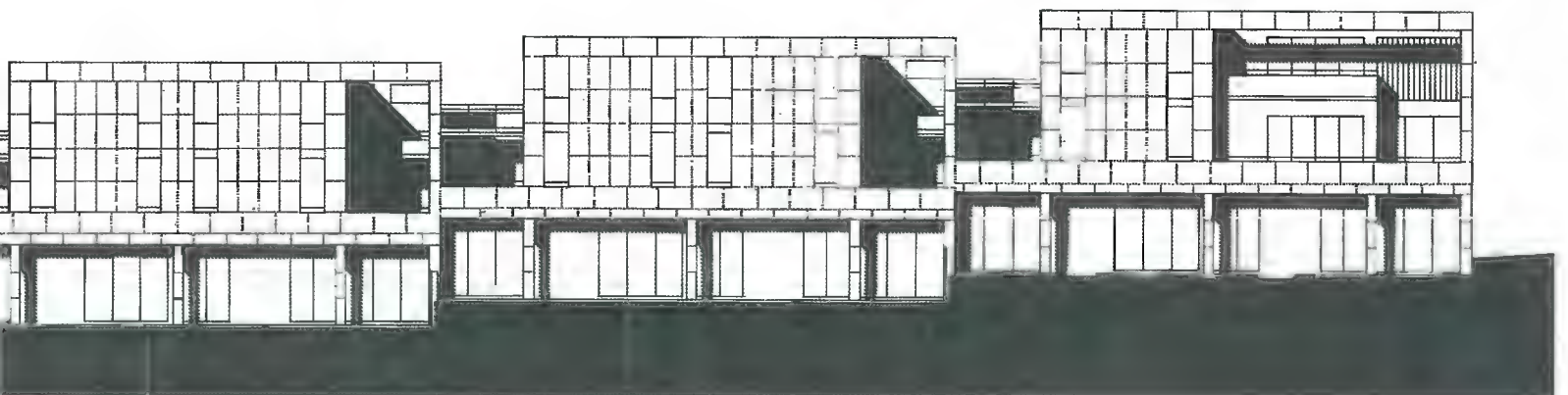


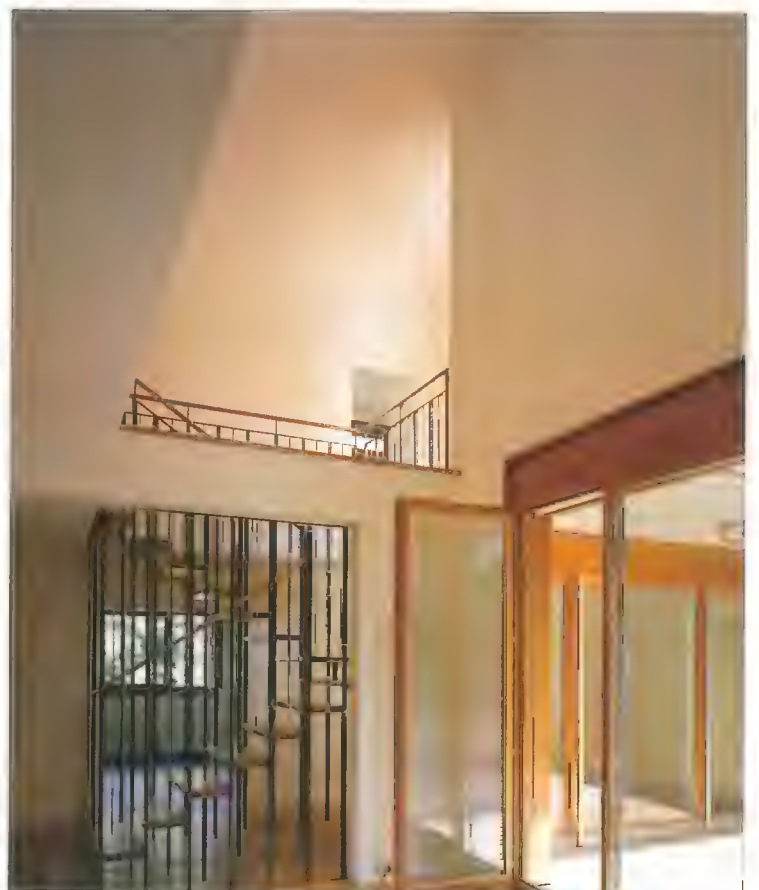


The building follows the natural slope of the terrain, giving it a scale in tune with the surroundings and respecting the views all around.



North-West elevation







Kleffel, Köhnholdt & Partner Architekten *Seniorenresidenz Elbschlosspark*

Hamburg, Germany

The design scheme was created out of a development brief for the area which was the result of a design competition. The original aim was to bring high-standard, rented accommodation and businesses to the site, while at the same time to maintaining the integrity of the historically significant malt house, the Elbschloss brewery and restaurant and the 18th century villa. The senior citizens' residential scheme covers the western area of the site, defined to the south by the Elbchaussee, to the west by the Elbschlobstrasse and to the north by the International Maritime Law Institute.

This residential scheme is based primarily on the concept of offering elderly accommodation in clearly defined independent household units where people can live as tenants enjoying the additional services offered within the whole development.

The four buildings to the west, what was previously the Elbschlob restaurant and both southern square plan blocks on the Elbschlobstrasse accommodate the residential units.

The base level of the three parallel buildings which are on the site takes on the function of entrance, with a driveway from the Elbschlobstrasse for the residences. The necessary service areas and ancillary accommodation for the elderly care center are located here, as is the entrance to the underground car park.

The ground floor of the care facility, the middle residential unit base and the two connecting wings accommodate the foyer and entrance areas, administration, lounge areas, a small shop and a hair-dressing salon, staff accommodation, a kitchen, dining room, therapy room and all other necessary service facilities.

The old Elbschloss restaurant has been reinterpreted as accommodation for the elderly, with a restaurant and dayroom housed on the ground floor of the eastern portion of the building.

A curving, underground tunnel links the residential villas, leading from the main foyer area, past the accommodation units to the restaurant on the Elbchaussee. This link, which is shielded from outside weather conditions, is intended for resident use.

Located in the four underground floors of the villas are communal rooms, connected directly to the tunnel, encouraging contact between the residents.



Photographs: Oliver Heissner / ARTUR

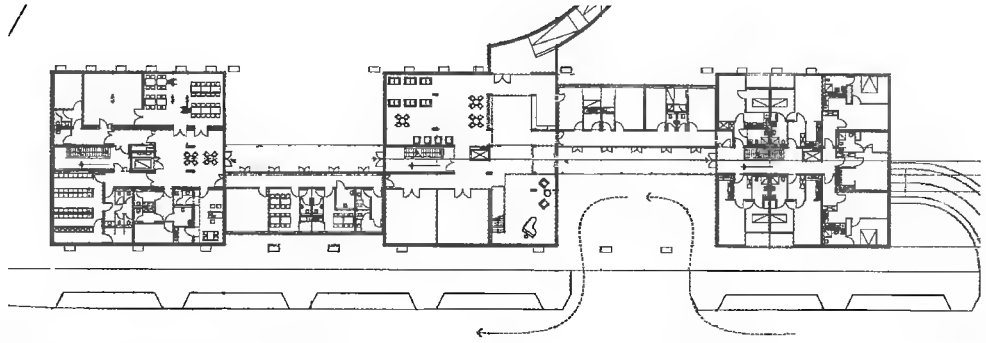




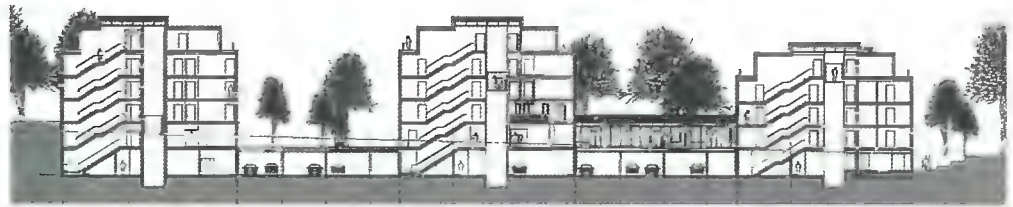
Site plan



The four buildings to the west, what was previously the Elbschlob restaurant and both southern square plan blocks on the Elbschlobstrasse accommodate the residential units.

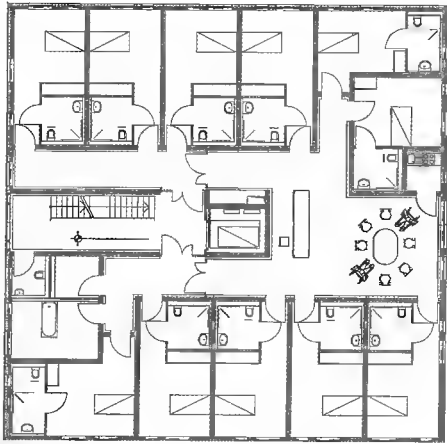


Main circulation floor plan

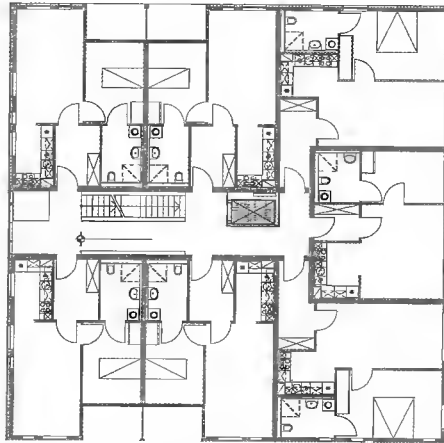


Section

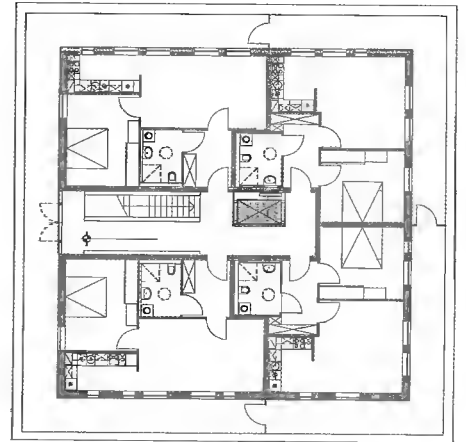




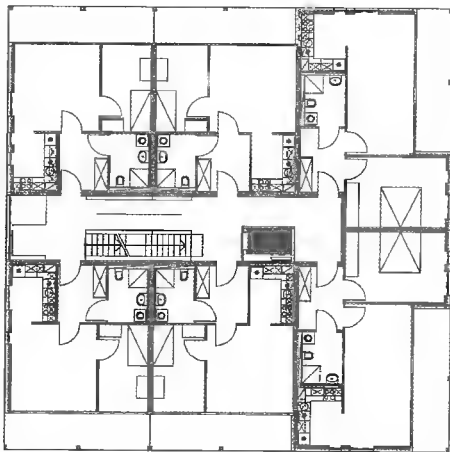
First, second and third floor plan (Type A)



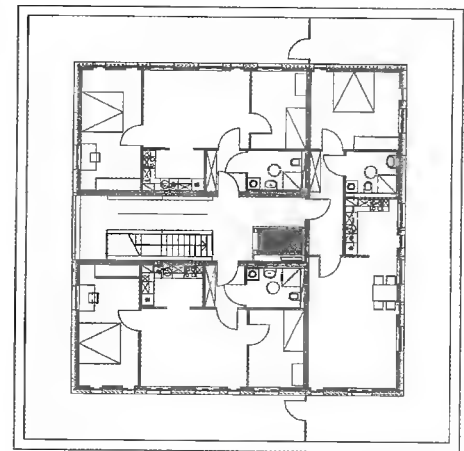
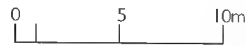
First, second and third floor plan (Type B & C)



Penthouse floor plan (Type B & C)



Ground, first and second floor plan (Type C, E, F & G)

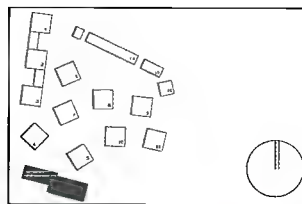


Penthouse floor plan (Type D, E, F & G)

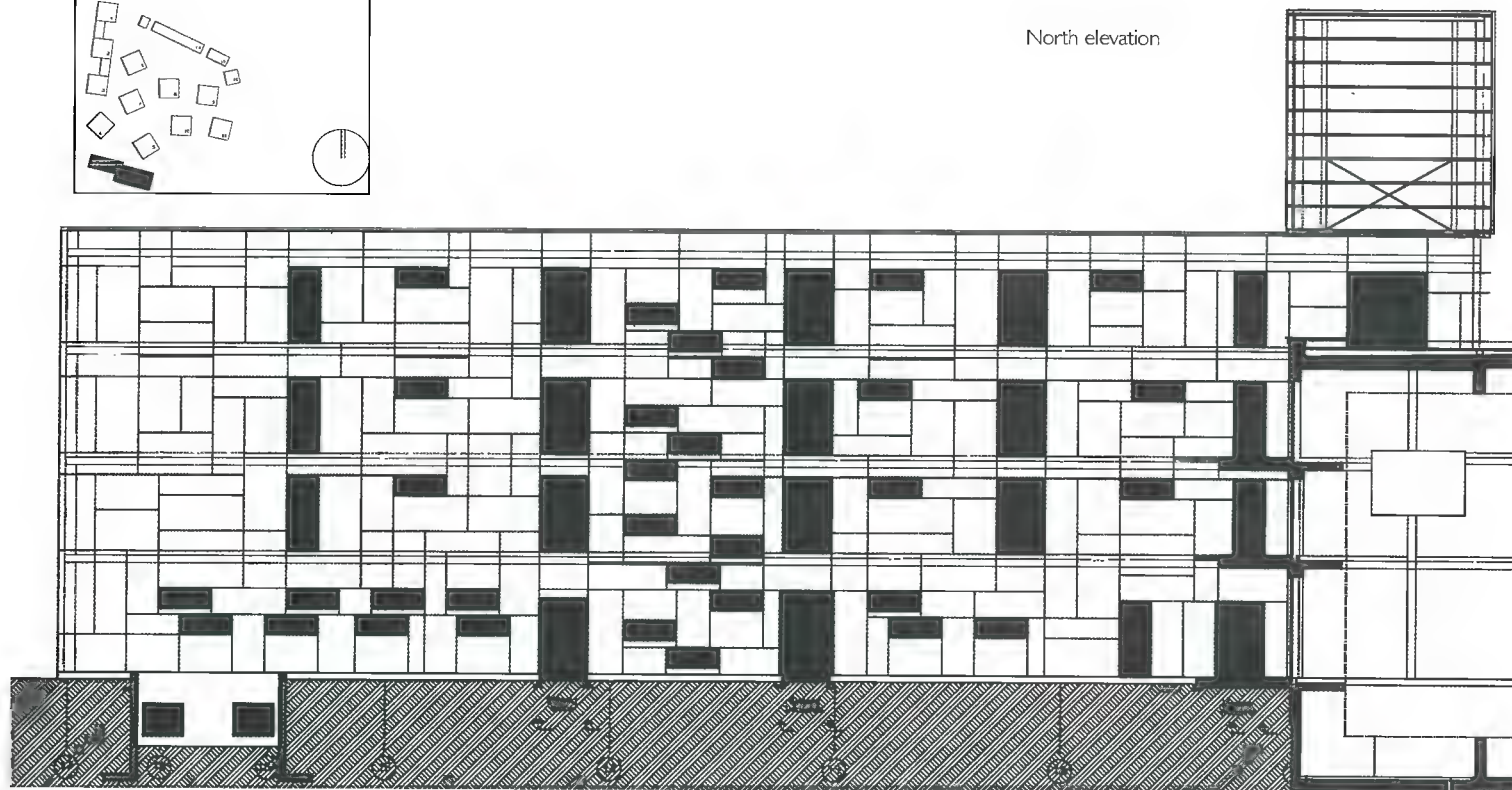
Wheelchair accessible units. Elevations (House type D, E, F & G)





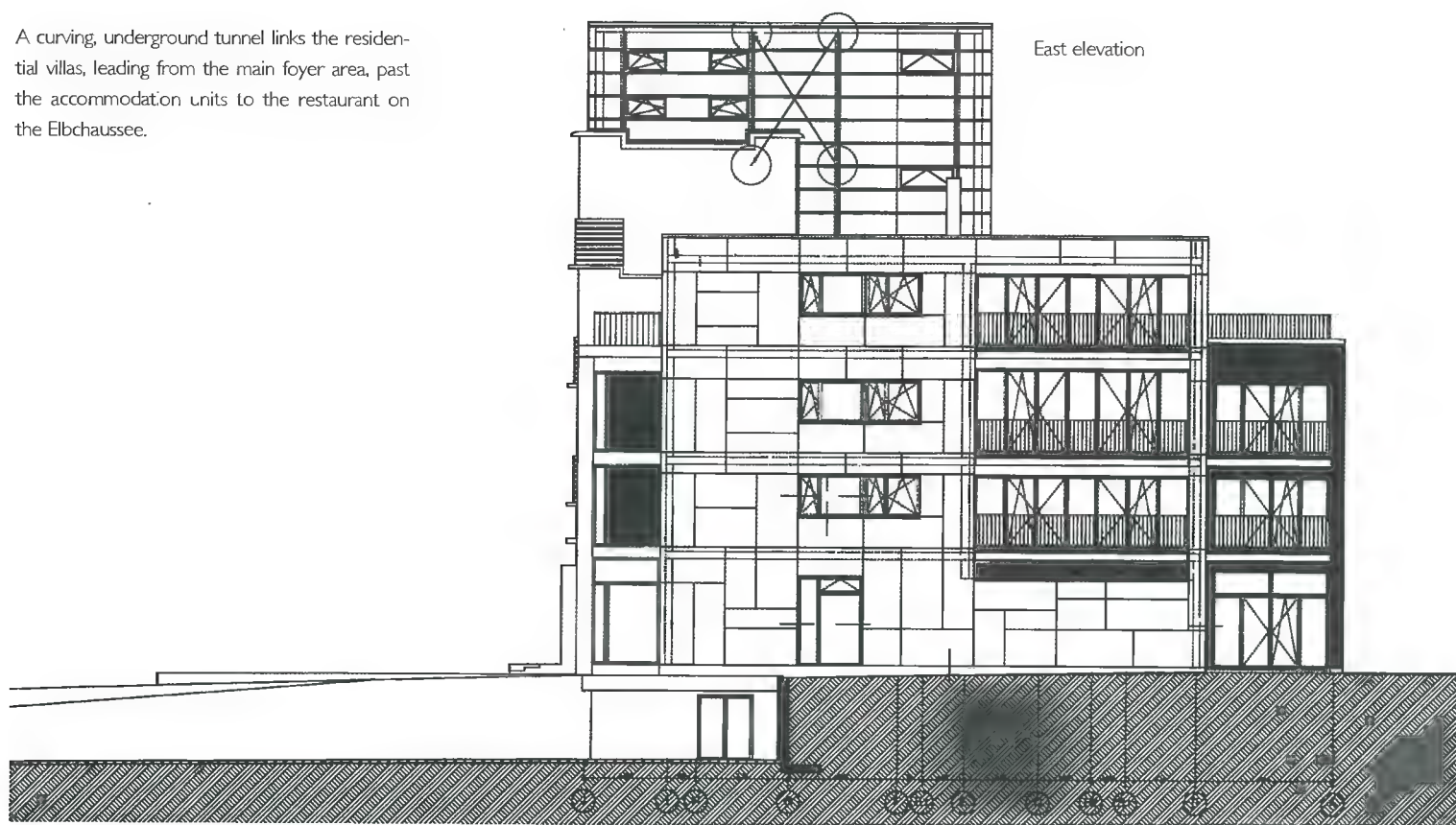


North elevation

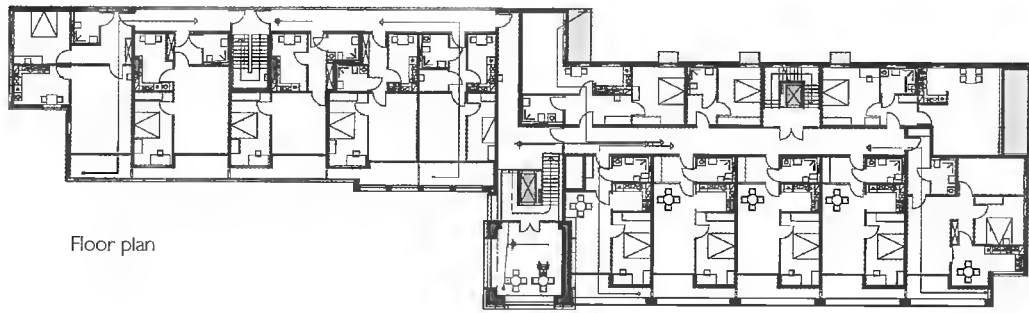


A curving, underground tunnel links the residential villas, leading from the main foyer area, past the accommodation units to the restaurant on the Elbchaussee.

East elevation







Floor plan

0 5 10m



South Elevation

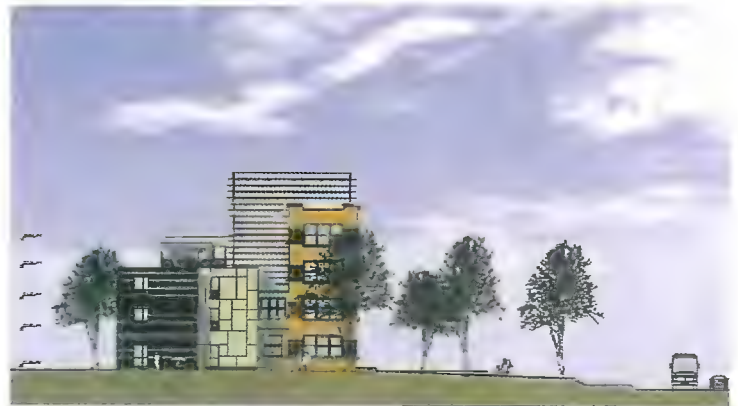




North Elevation

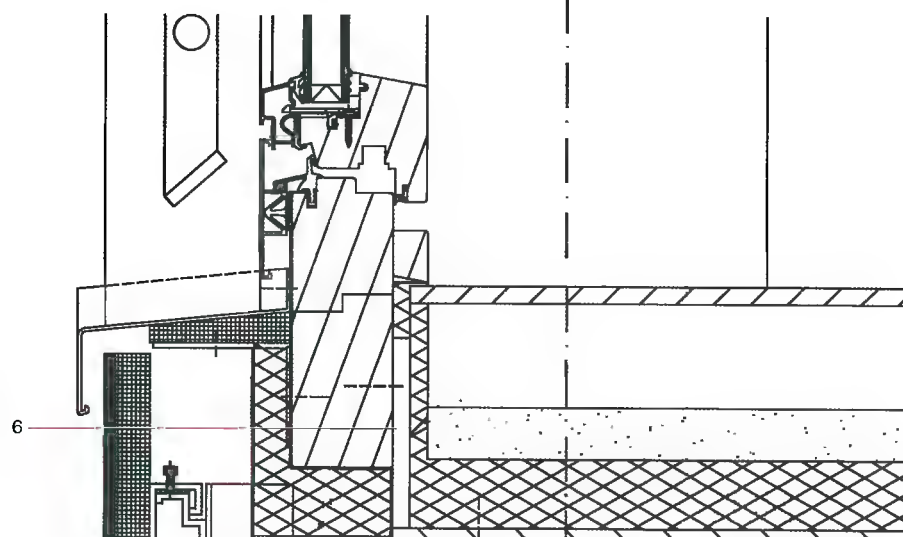
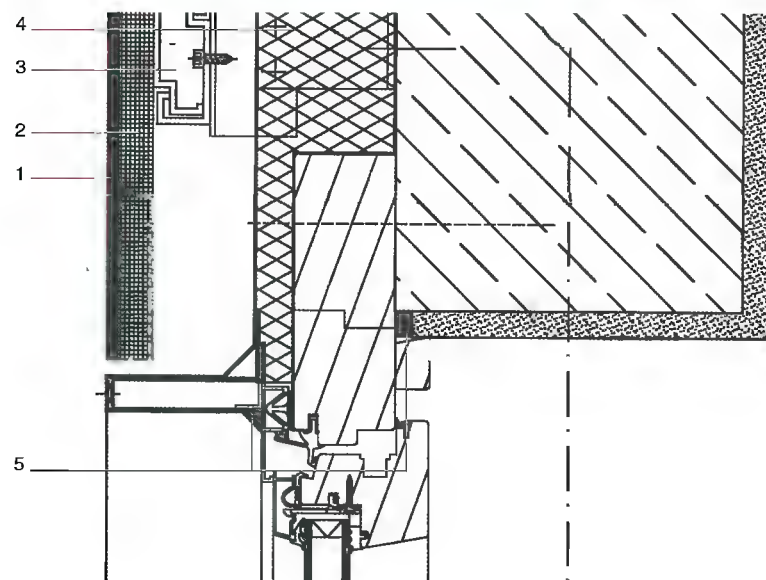
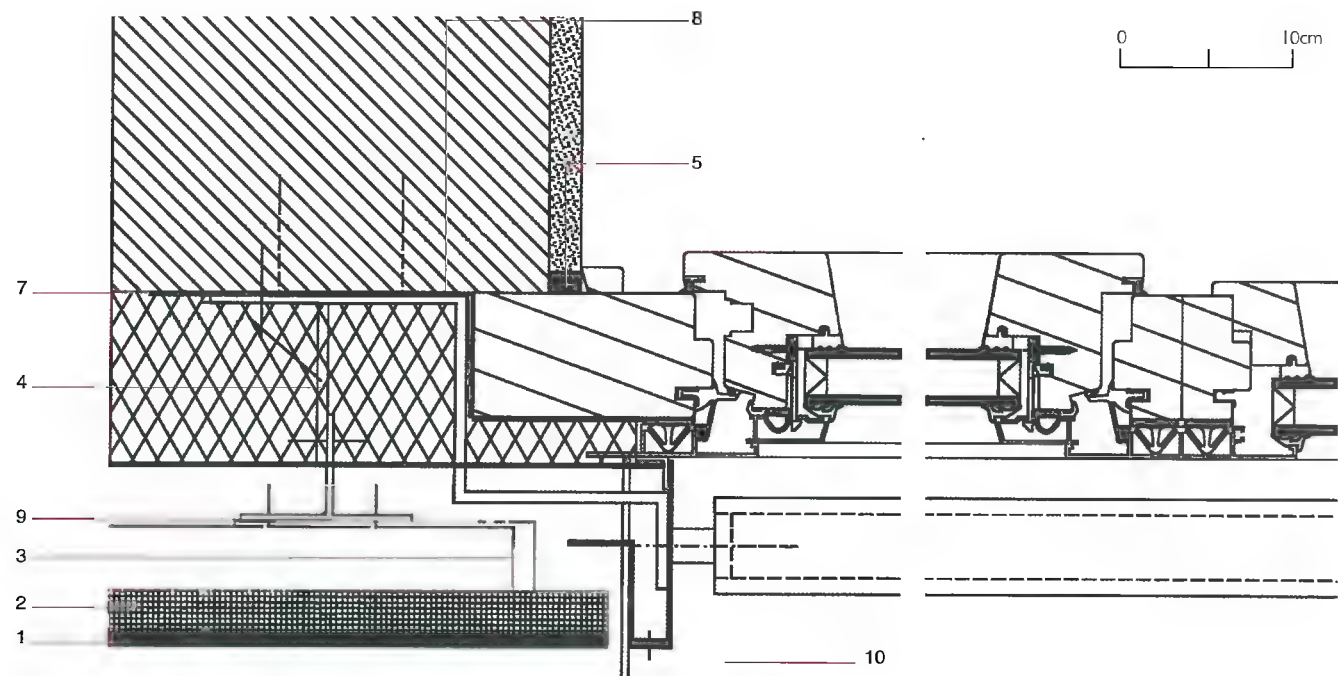


East Elevation



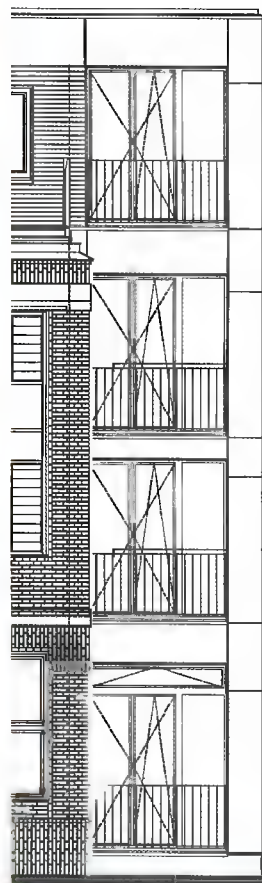
West Elevation



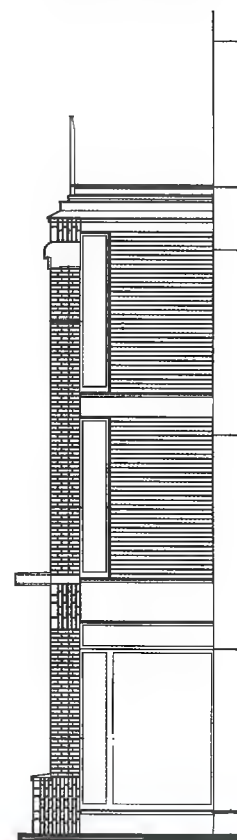


Construction detail

1. Glass plate
2. 20 mm support board
3. Guide rail
4. Anchorage
5. Elastic sealing
6. Steel profile
7. Dragging foil
8. Galvanized stole railing console
9. T profile
10. Windowsill



Construction detail



Kada + Wittfeld

St. Niklaus senior citizens home

Neumarkt, Austria

The "St. Niklaus" home for the elderly is designed to adapt to the characteristics that should be adopted by any center of this type: a clear layout with short distances that facilitate the staff's working conditions and help the residents to find their way around without foregoing a great variety of spaces and a human environment.

The internal life is organized in two "streets" of rooms as though they were small houses, with a bench in front of each door where the corridor widens. Different colors for each housing unit help to identify each room.

Light, glass and wood combine tradition with a modern interpretation of what a home for the elderly should be. The outer covering of wood, a recognizable element typical of the Salzburg region, extends inside. The façades and glass sheeting form a continuous and tangible unit. In each bed-sitting room, a small glazed balcony offers an additional place to sit among the vegetation.

The layout on two floors respects the proportionality of the environment; the glazed balconies break the uniformity of the façade, generating views and giving importance to the single apartments units.

The built-up area has been deliberately minimized, leaving space for a garden that extends the "green oasis" from the interior to the exterior. The layout marks the limits, to a certain extent, between the areas that are controlled and those of free access, without the residents feeling shut in.

The building goes beyond the limits between interior and exterior, breaking the monotony with its balconies on the façade and setting a warm atmosphere by the generalized use of wood. The tension between glass and wood, privacy and opening to the exterior, all reflect life in the residence: the protective skin deliberately filters and makes opening up and integration into the community and life around the building possible.

Photographs: Margueritta Spiluttini, Fritz Lorber





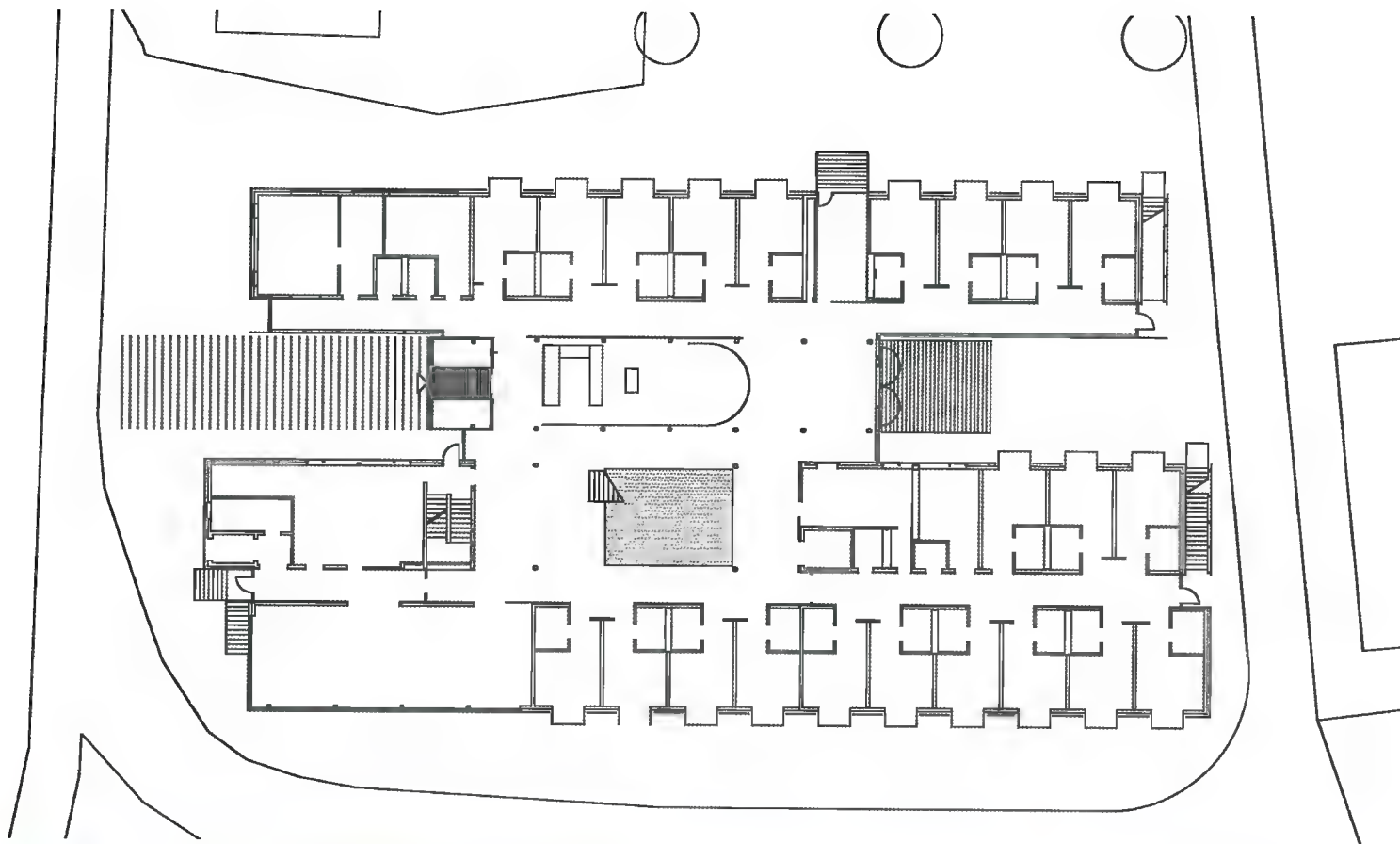
Site plan



Quality requirements can be perceived emotionally, experienced in space and with the senses: light, glass and wood combine tradition with a modern interpretation of what a home for the elderly should be.



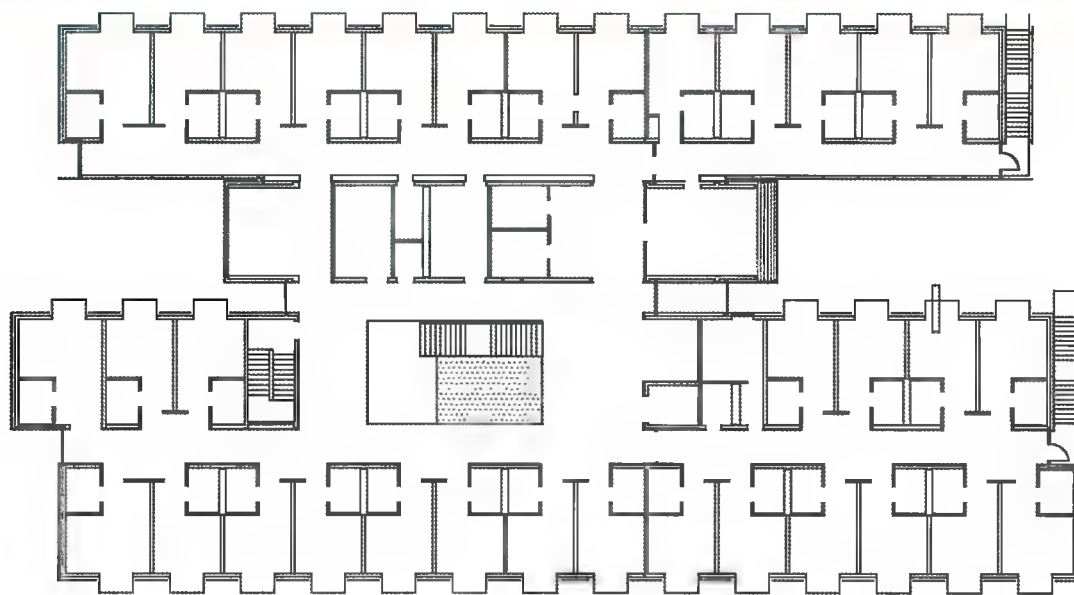




Ground floor plan

0 5 10m



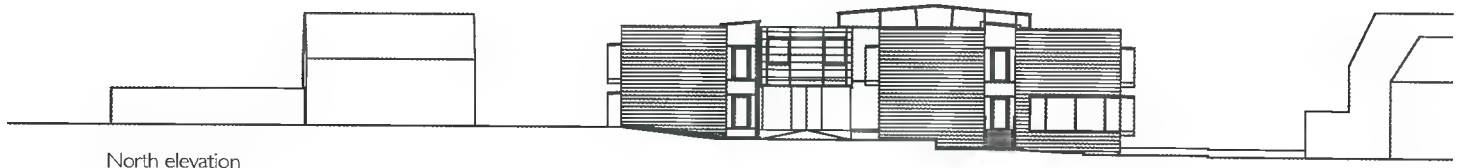


First floor plan

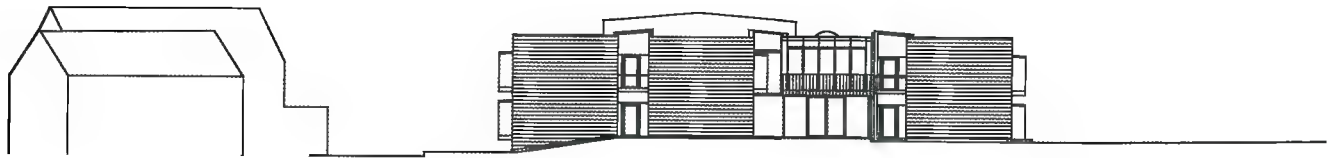
0 5 10m



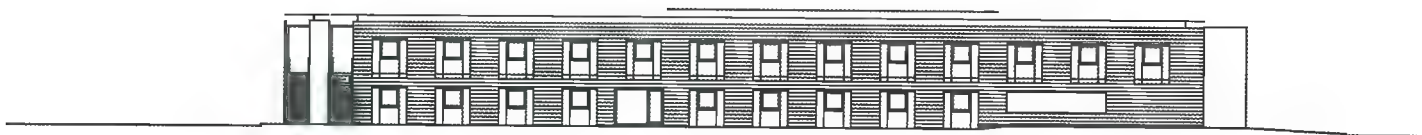




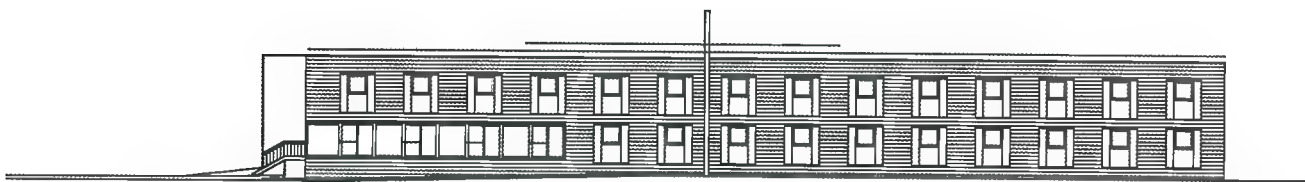
North elevation



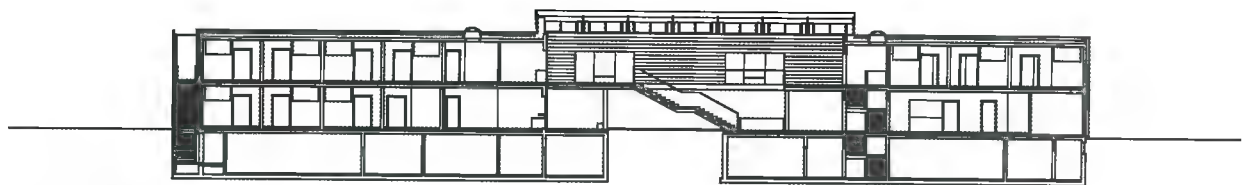
South elevation



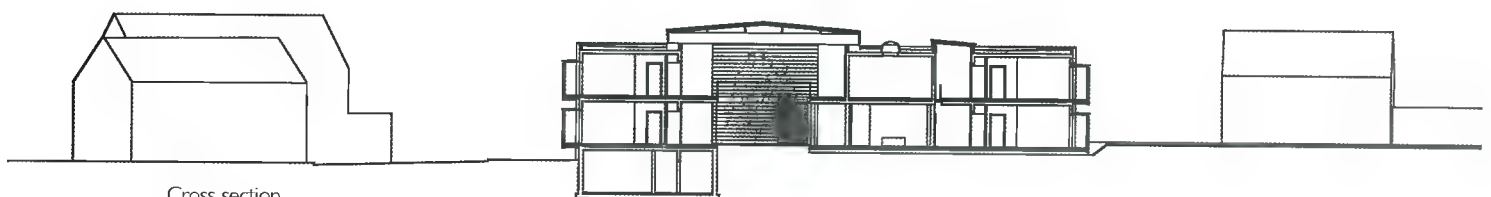
East elevation



West elevation



Longitudinal section



Cross section



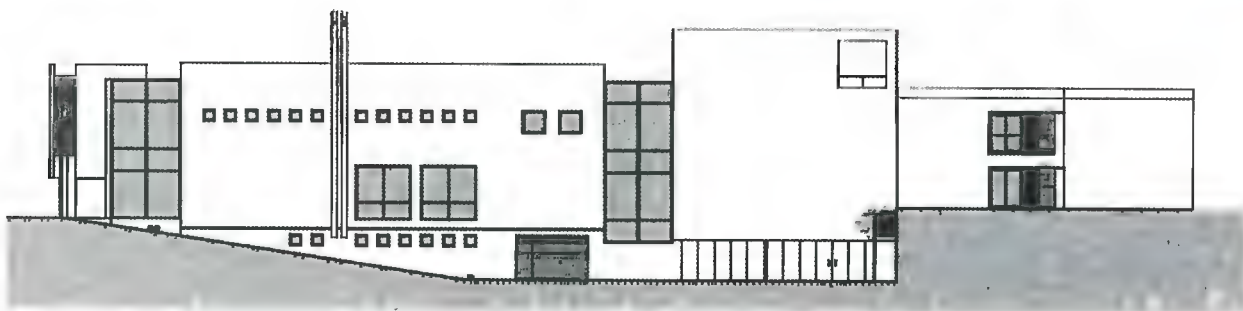
Joan Lluís Casajuana *Novallar de Cunit*

Cunit, Tarragona, Spain

This senior citizens residential center is located in the municipality of Cunit, in Tarragona's very sunny vacation area of the Costa Daurada. The building is located on a 87 m wide by 75 m long site, on a flat area surrounded by low, semi-detached houses.

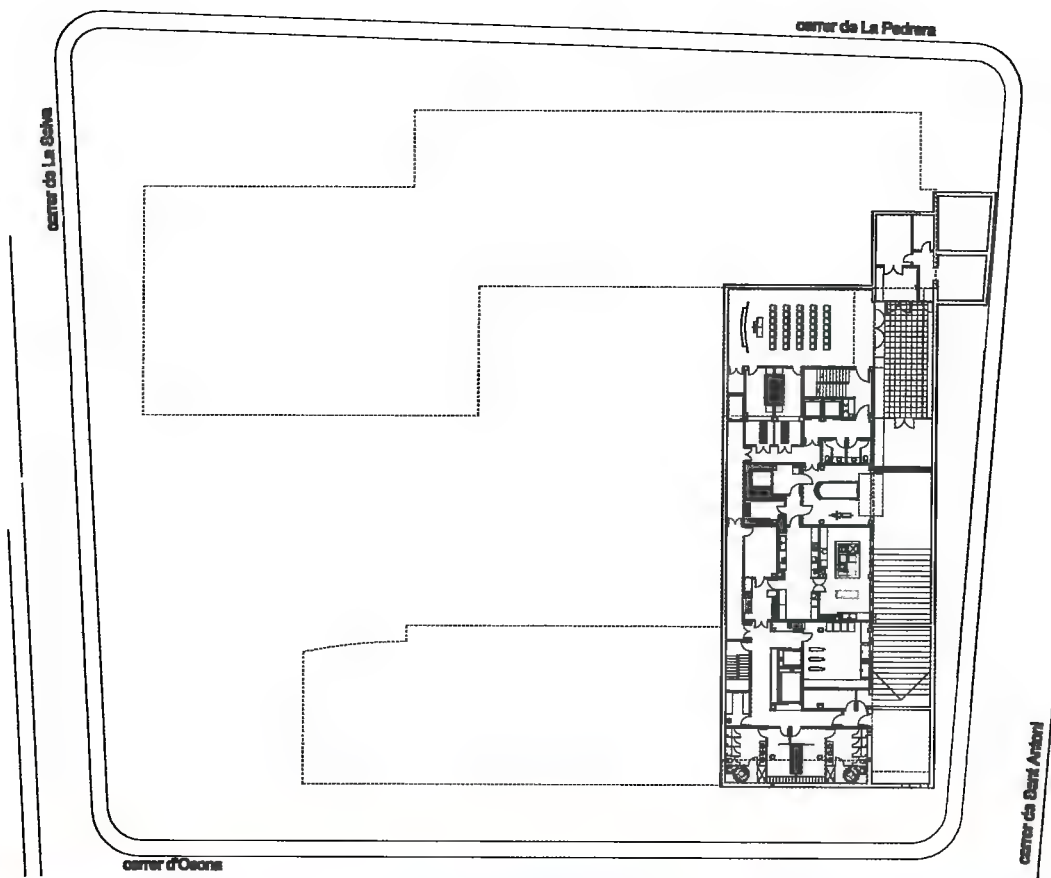
The building is a free-standing, U-shaped rectangle, with its main façade and entrance facing south so that the afternoon sun reaches all the interior landscaped areas of the complex. The initial plan is 60 sheltered apartments with services and 20 sheltered rooms with 30 beds for mobility-reduced elderly. The other areas comprise common lounges, a dining hall, living rooms, rehabilitation and occupational therapy areas, doctors' and administrative staff offices, a library, a physical exercise room and a therapeutic heated swimming pool. The staffed services are accommodated on the ground floor, including the kitchen, laundry, changing rooms and storage facilities. This project consists of two buildings joined by a two-story, glazed passage where the services building is L-shaped, joined to the south façade. The apartment building composes the upper arm of the "U". The sand-colored services building, with glazed endlosures and a steel-colored curtain, has a basement, ground level and upper floor. The residents' common lounges and activity areas are on the ground floor, with direct access to the garden. The upper floor houses the sheltered rooms each with their living room, dining room, and private occupational therapy room, as well as the staff lounge and connected services. The upper arm of the "U" comprises the apartment building, which is sienna-colored with the exterior woodwork in white. Two different types of adapted apartments are contained on the ground level and upper floor. Half of the apartments are bed sitting rooms, with a kitchen concealed within a cupboard and a bathroom, and the rest of the apartments have a separate double bedroom, living room, kitchen and a bathroom specially adapted for the elderly. As is typical of the Mediterranean area, the enclosures of this section are "Majorcan-style" adjustable folding shutters, with a wide, floor-length opening, to allow a complete view of outside and capture the most sunlight.

Photographs: Joan Argelés



Elevation I

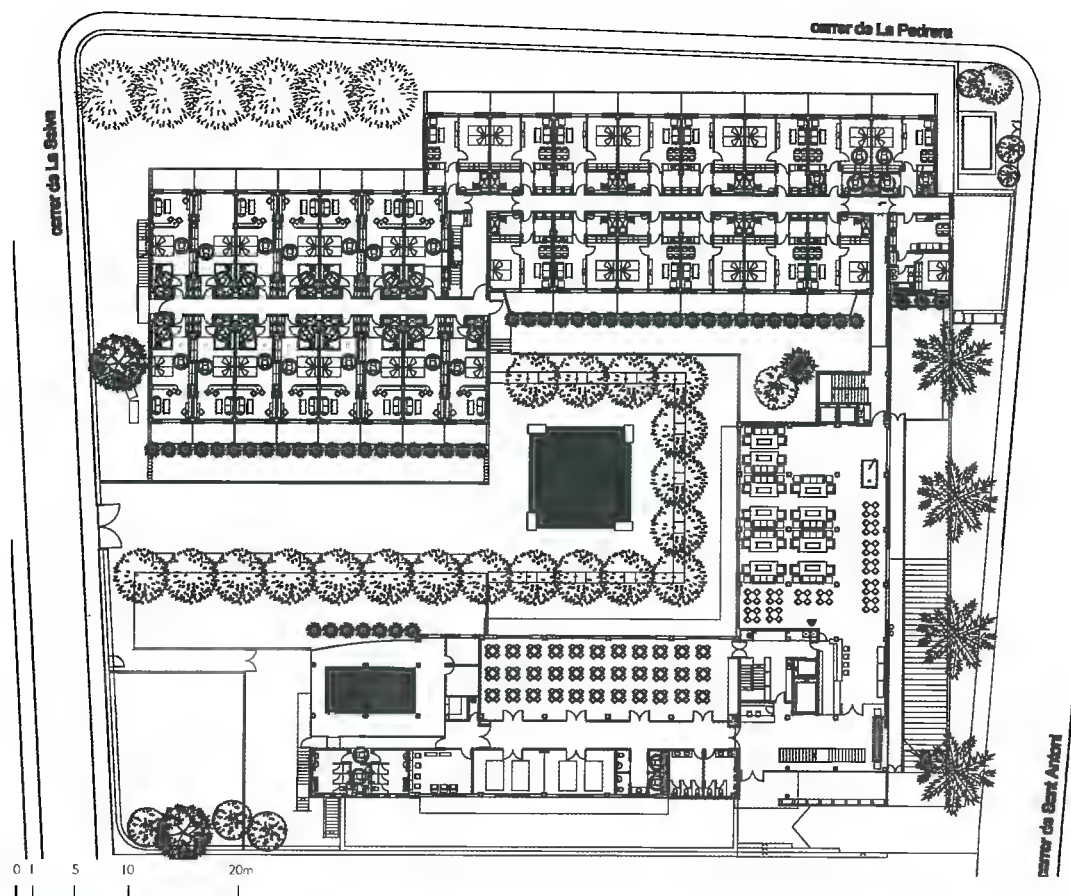




The free-standing building is a U-shaped rectangle, with its main façade and entrance facing south so that the afternoon sun reaches all the interior landscaped areas of the complex.

Basement floor plan

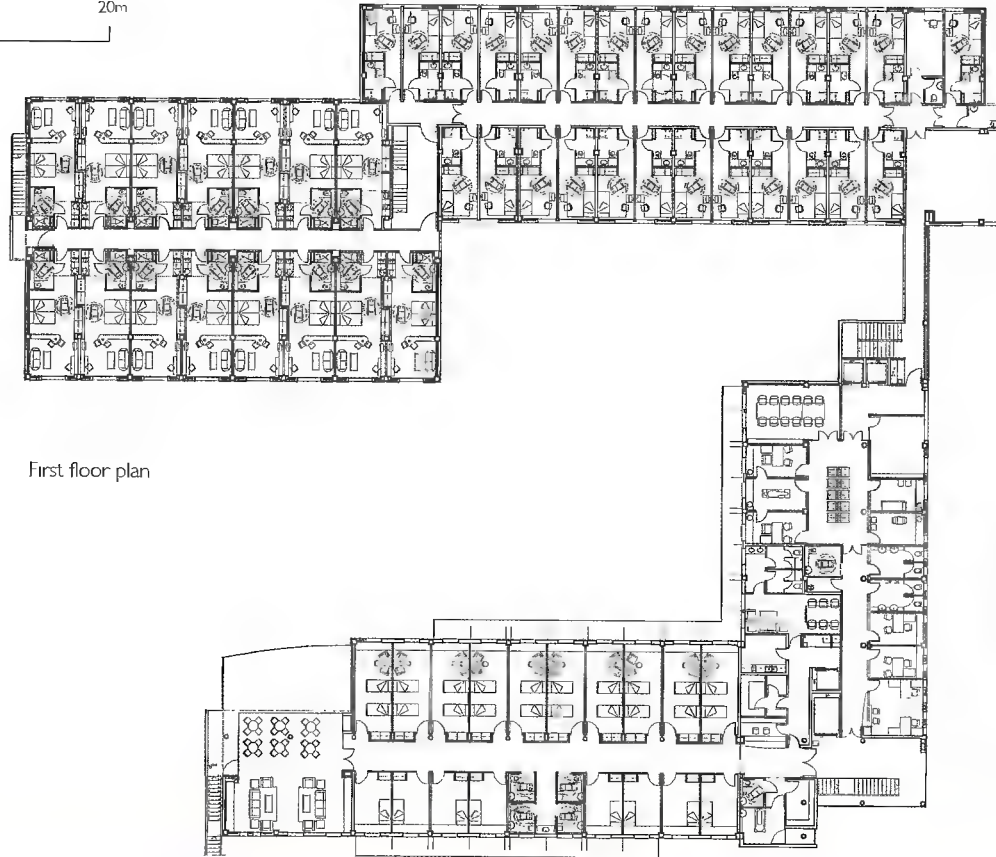




Ground floor plan



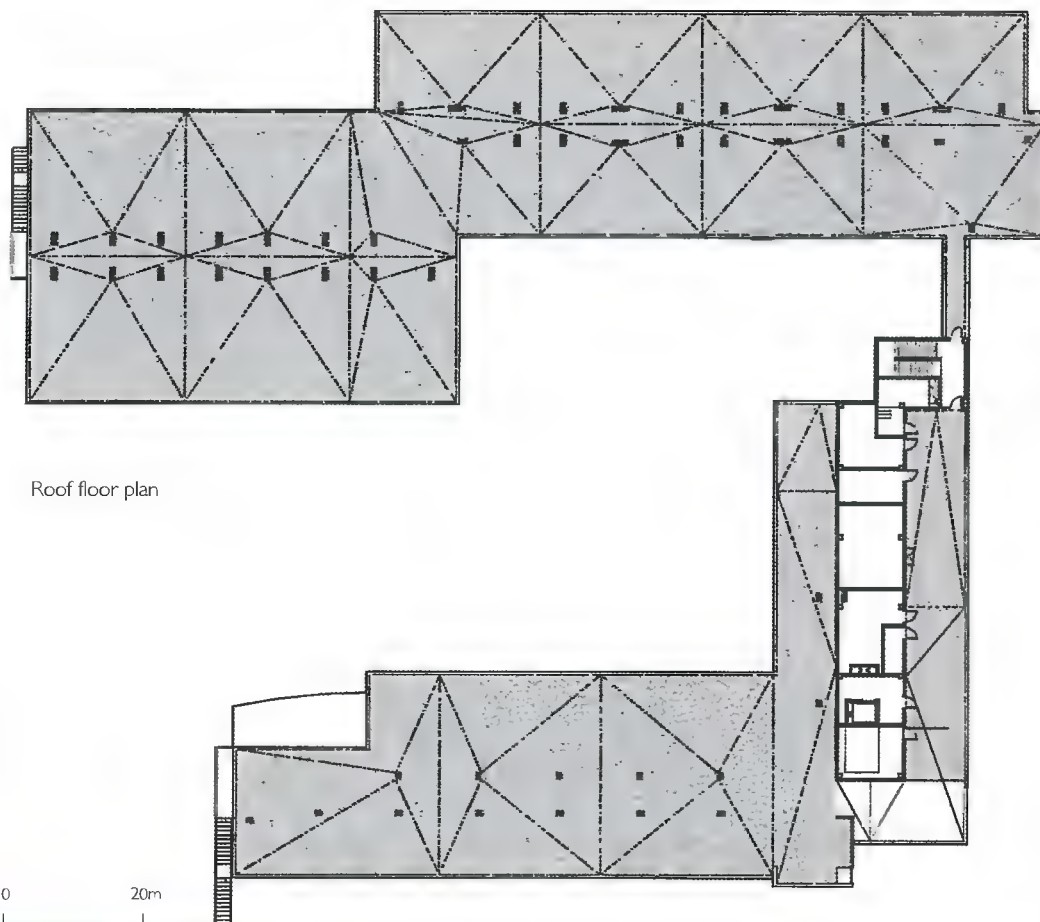
0 1 5 10 20m



First floor plan



carreter de La Salva



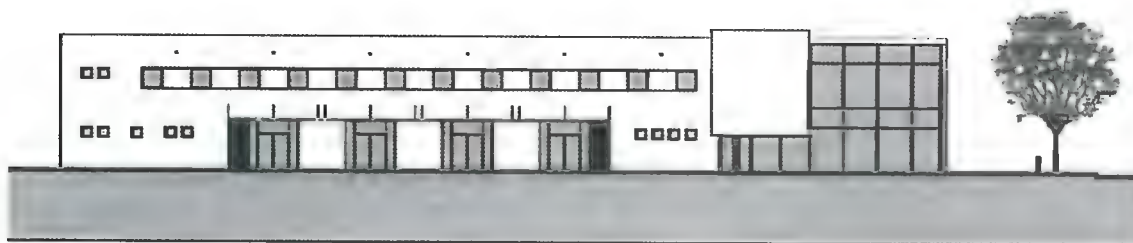
r de Sant Antoni



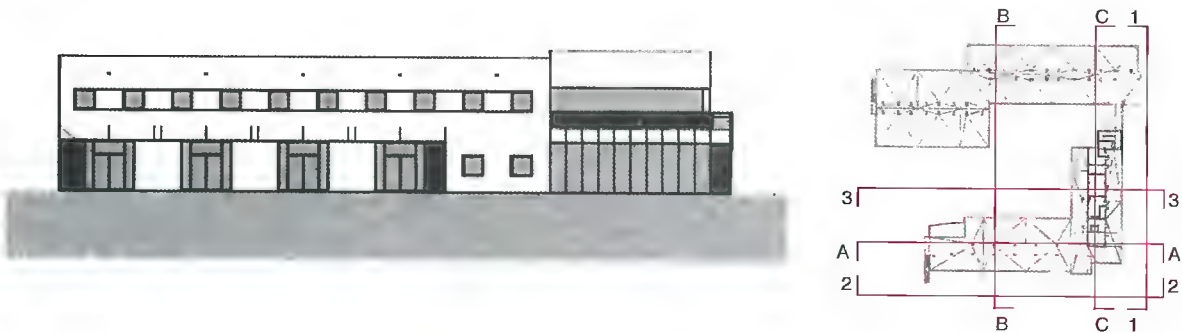




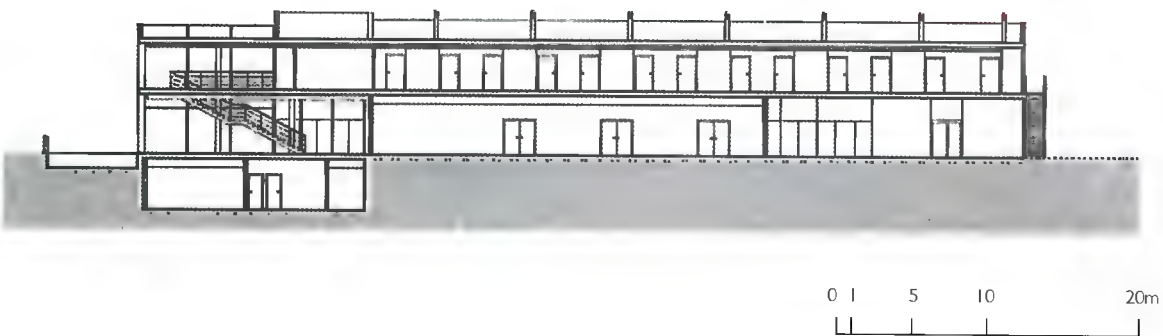
Alzado 2



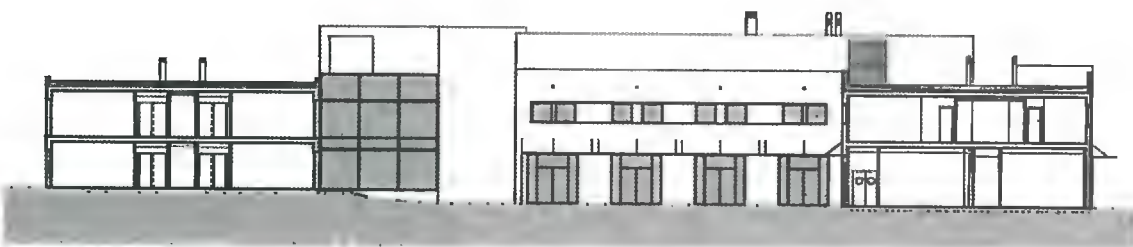
Alzado 3



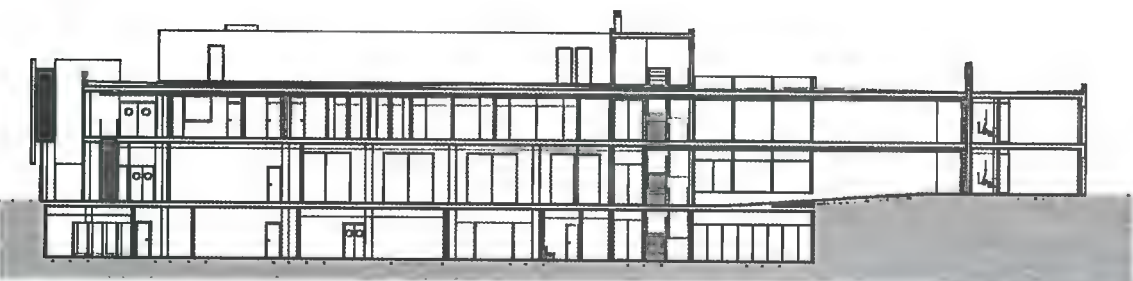
Sección AA



Sección BB



Sección CC





Alexander Reichel *Urban Villa in Kassel*

Kassel, Germany

This development, situated on the banks of the River Fulda, diagonally opposite the Dokumenta exhibition grounds, comprises six dwellings (including two maisonettes) and a 120 m² office unit. The building also includes an underground car elevator parking system.

The project was conceived as a unit construction system, designed in response to the competition brief. The brief required a building type that would allow a maximum of flexibility in the use and layout and that could be adapted to various site conditions. A three-dimensional load-bearing structure was developed that could be extended in all directions and would provide functionally neutral spaces.

The traditional timber-framed form of local construction was taken as a point of reference for the design of the cubic structure. Only the staircase attached to the north side breaks out of the cube, and it serves to house storage and service spaces. By day, this staircase is filled with natural light; at night, the access spaces are illuminated by a specially designed lighting column and the lighting behind the glazing to the lift shaft.

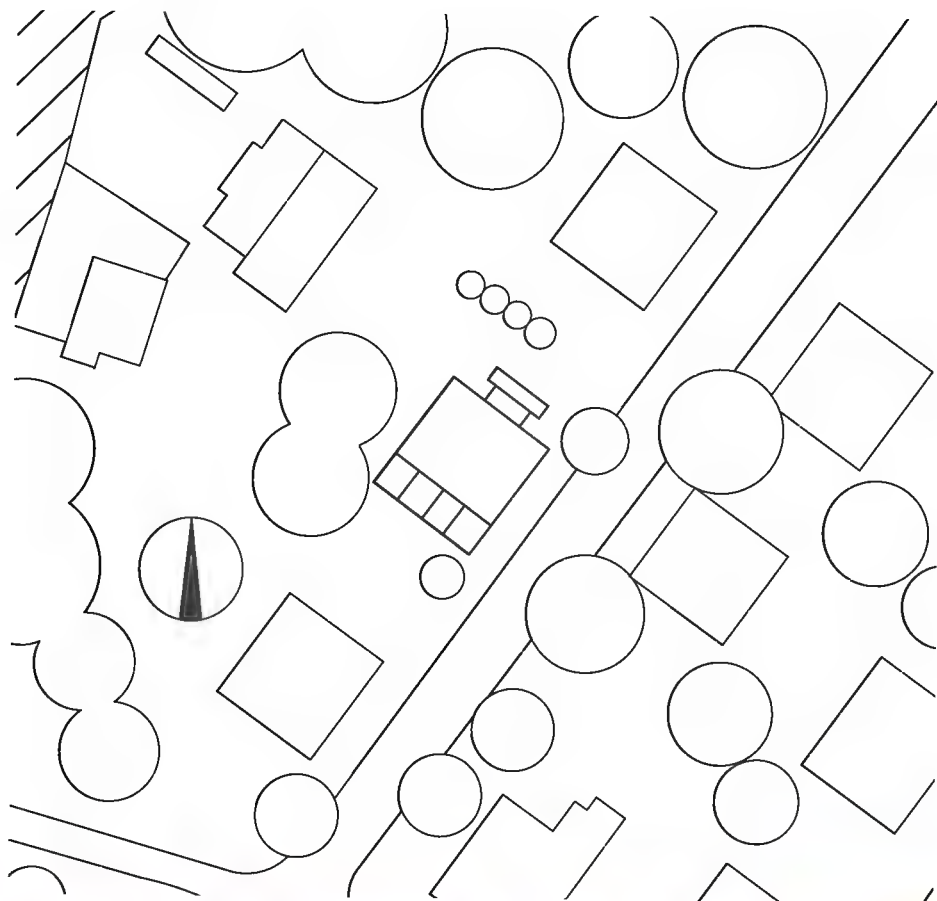
The two top stories contain two four-room maisonettes with roof terraces. These roof terraces afford extensive views over the green landscaped surroundings. To the south, one can look across the River Fulda and the Dokumenta site to the city center of Kassel.

Layering on the facade allows individual control of ventilation and the penetration of natural light, depending on the time of day and user needs. The wind-resistant folding and sliding shutters are operated from inside the building by manual cranks. This resulted in a facade with a varied and lively appearance that changes with day-to-day occupant use.

Photographs: Christian Richters







Located on the banks of the River Fulda, not far from the town center, the building combines a reinforced concrete skeleton frame and solid areas of external walling, clad in fiber glass-reinforced, pre-cast concrete elements, with larch timber in-fill.

Site plan



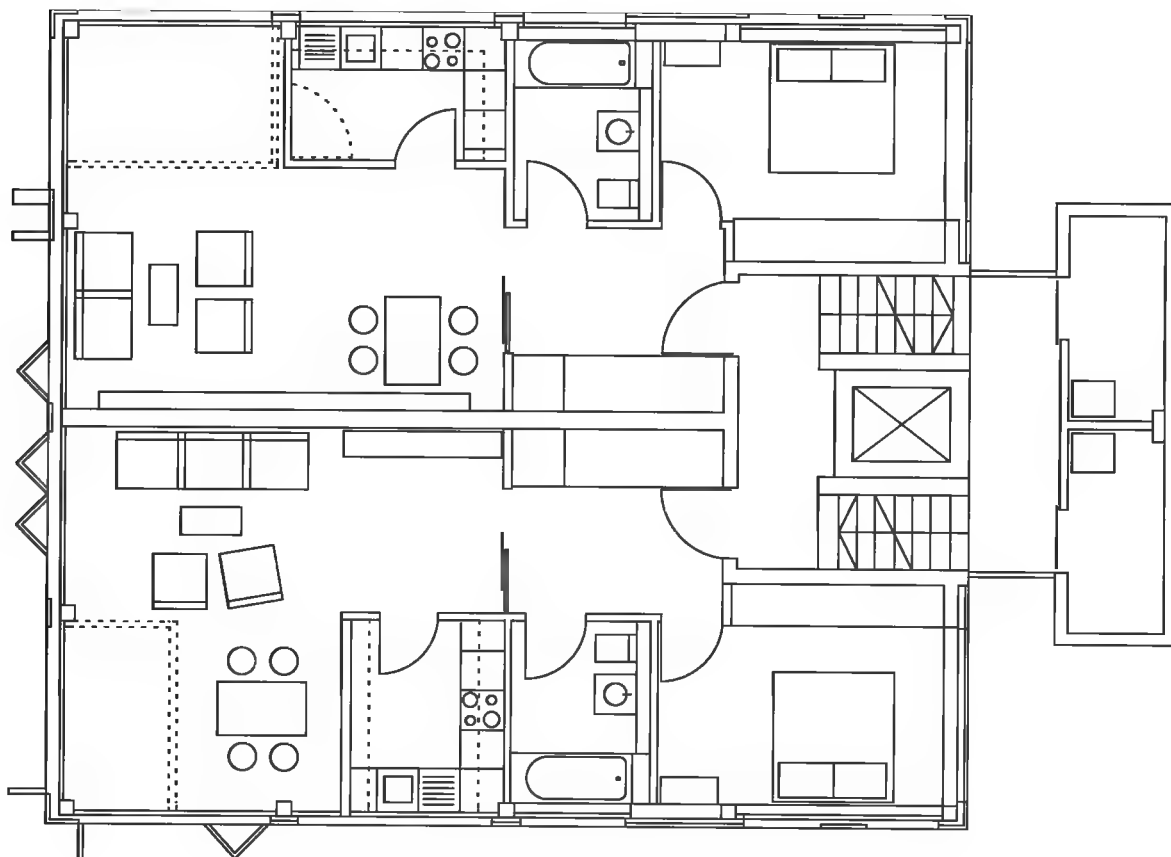




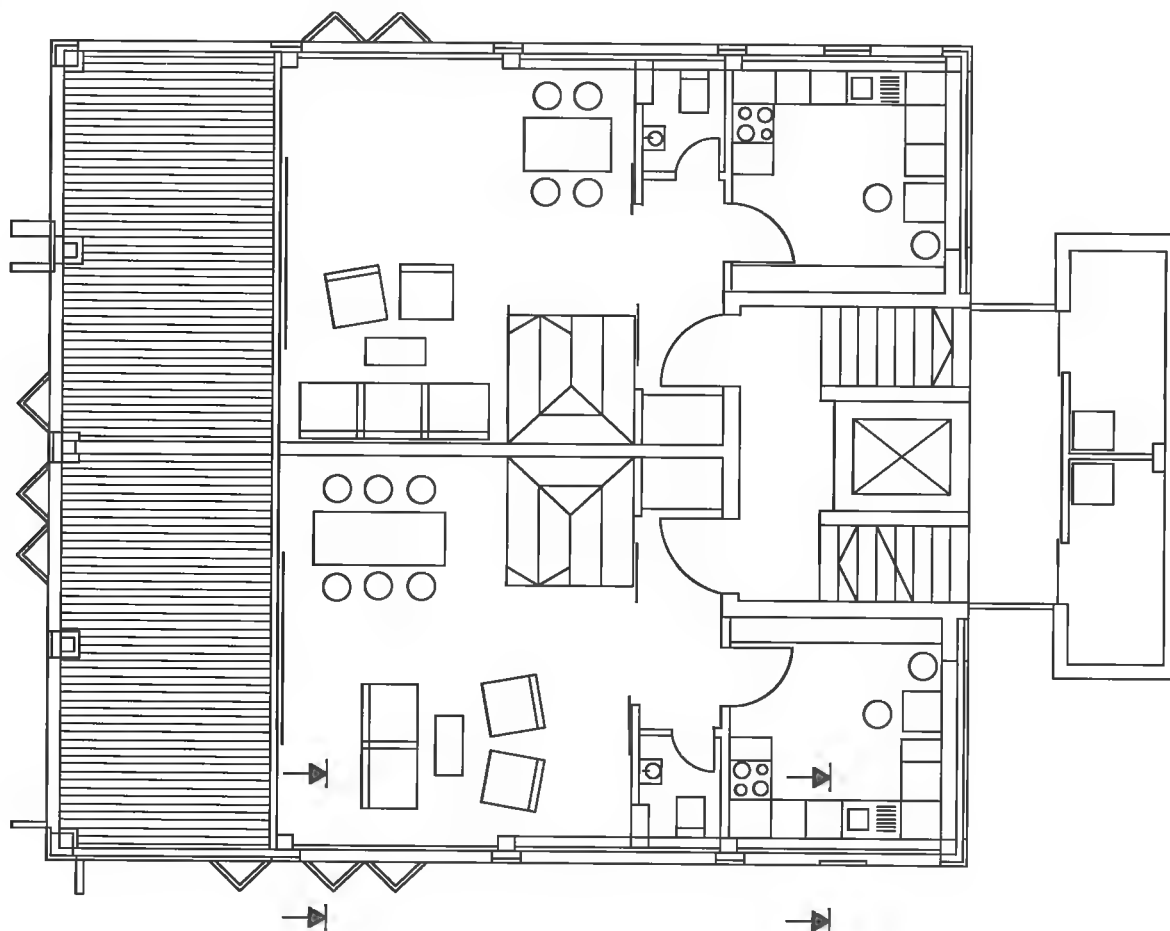
Ground floor plan







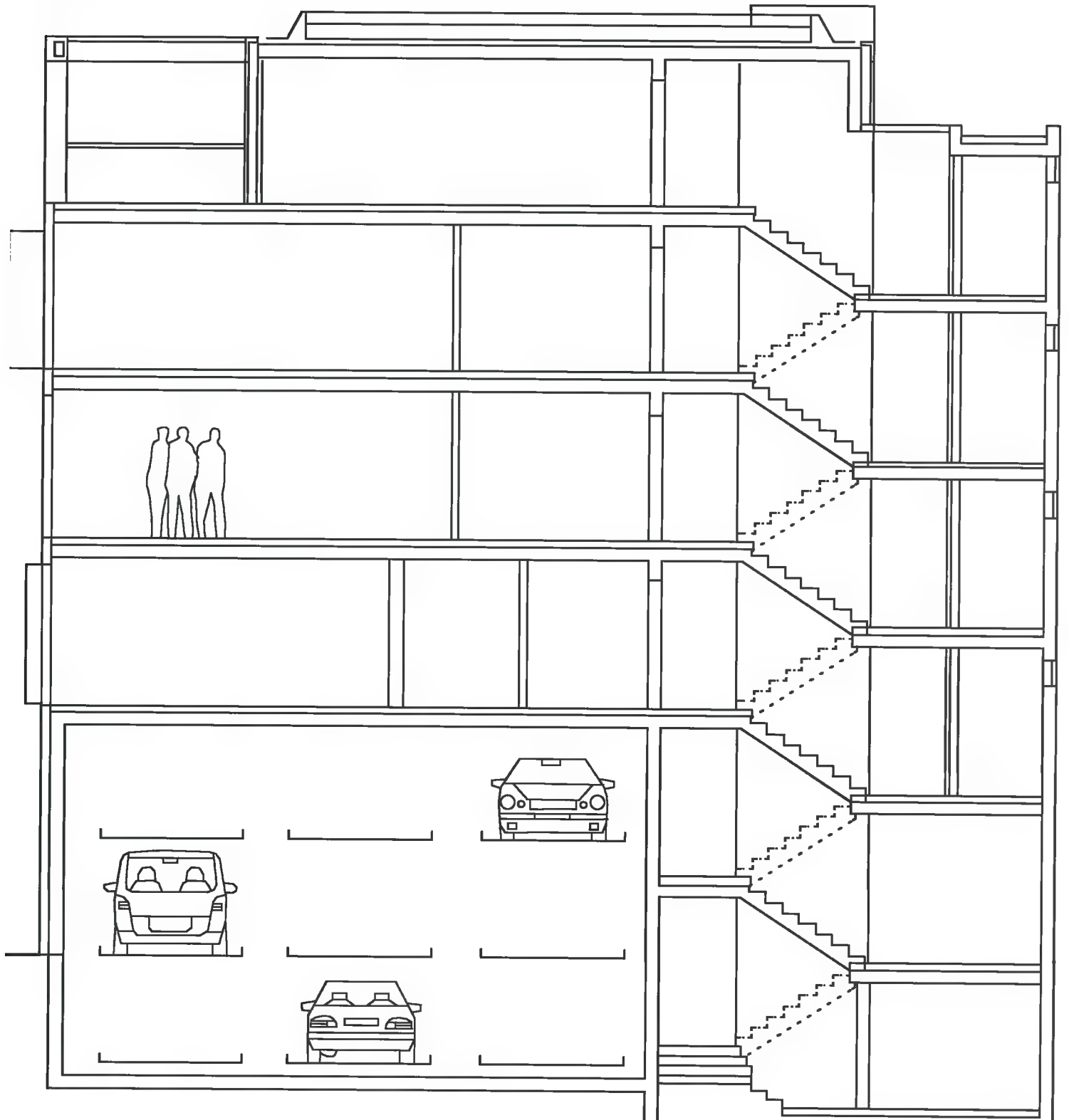
Third floor plan

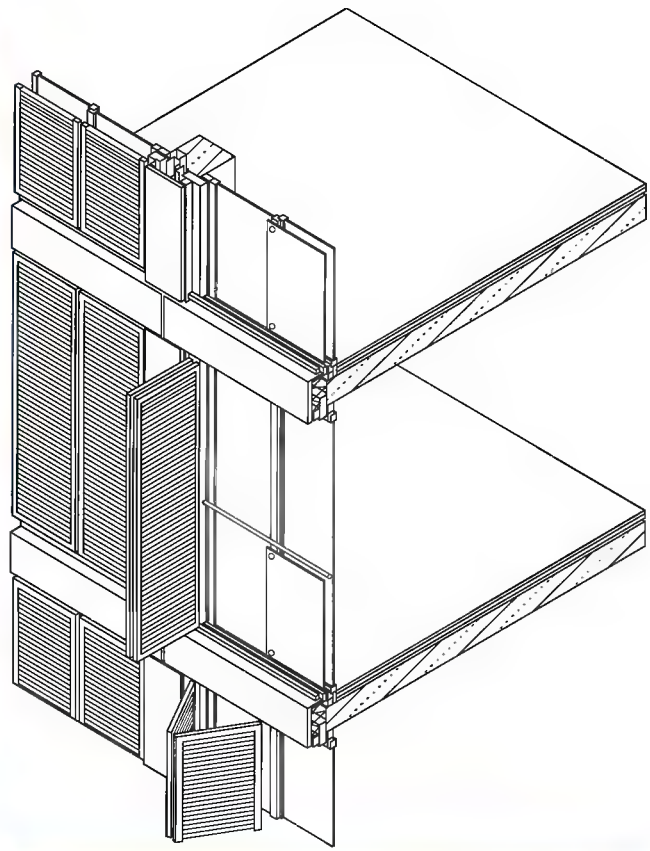
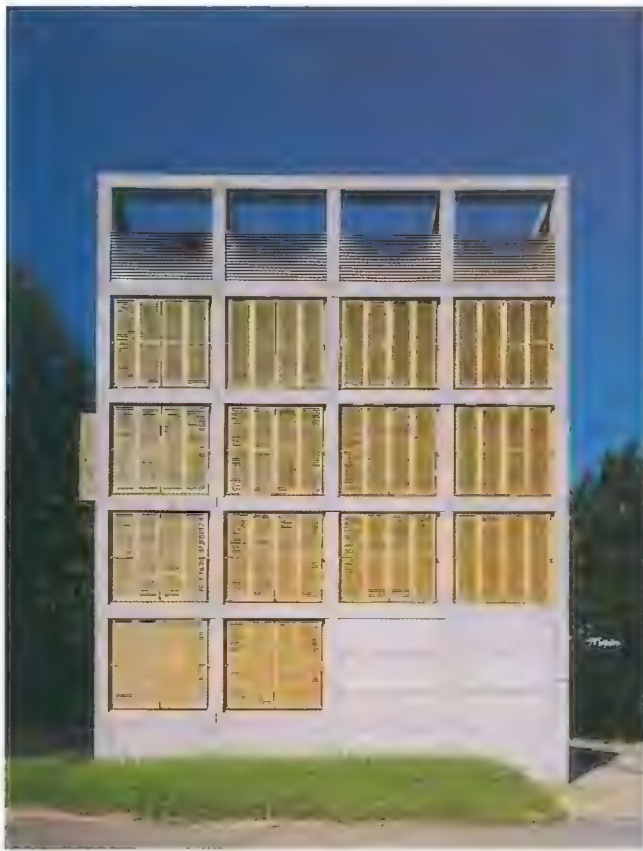


Top floor plan



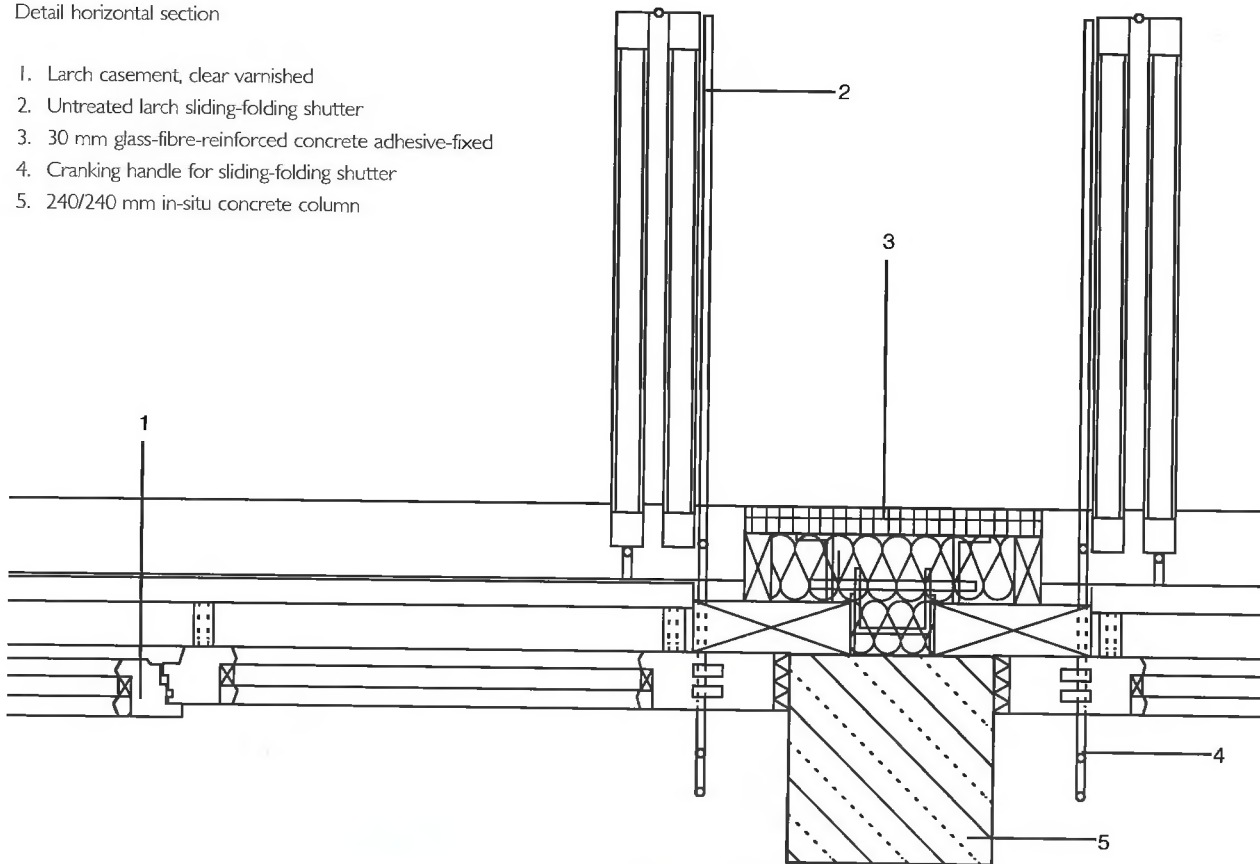
Cross section





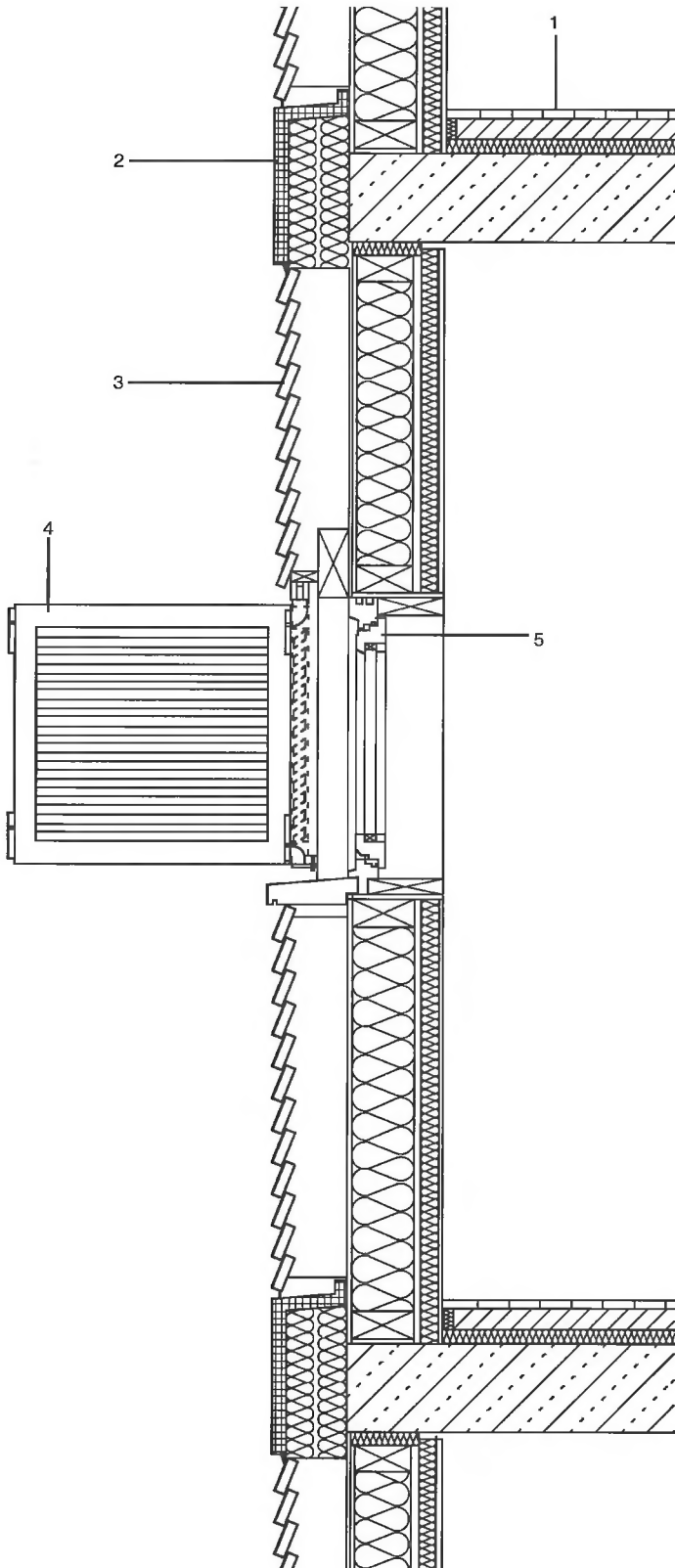
Detail horizontal section

1. Larch casement, clear varnished
2. Untreated larch sliding-folding shutter
3. 30 mm glass-fibre-reinforced concrete adhesive-fixed
4. Cranking handle for sliding-folding shutter
5. 240/240 mm in-situ concrete column



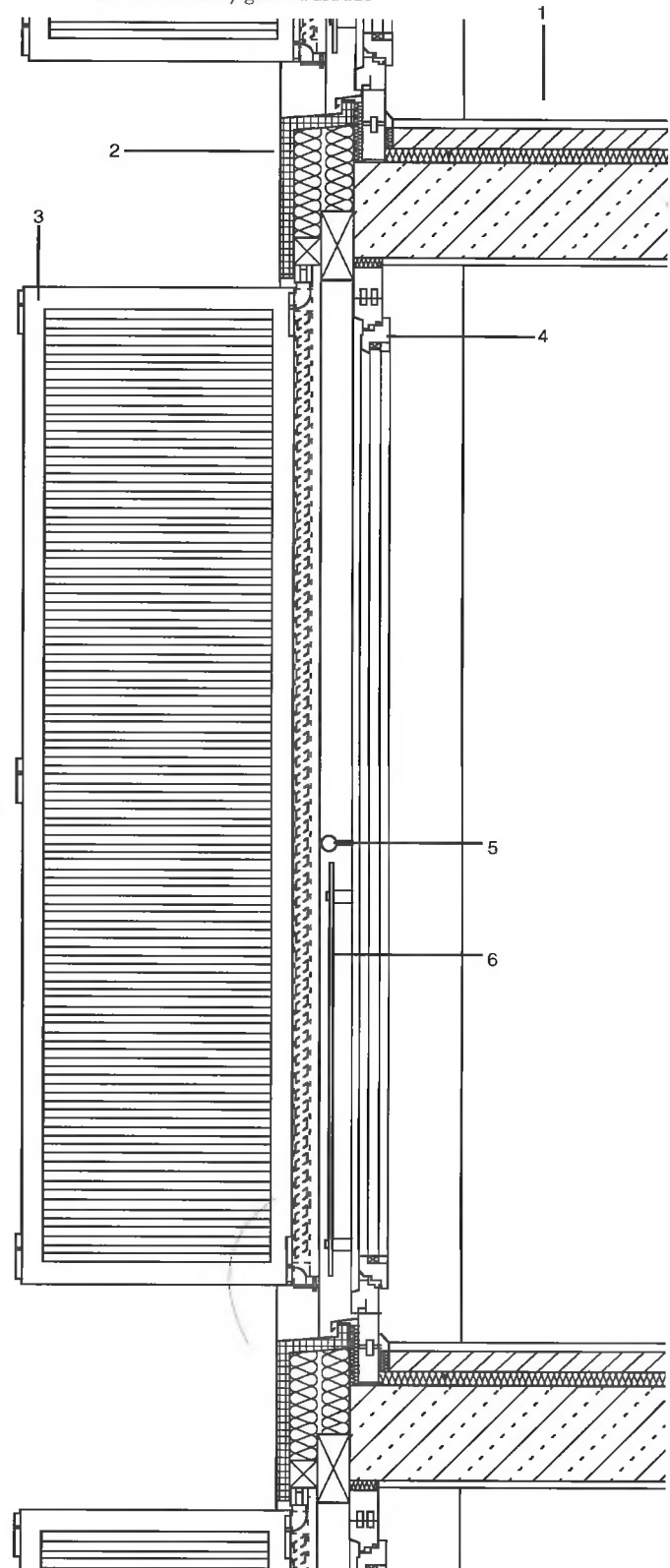
Vertical section of east-west timber wall

1. 22 mm industrial-quality parquet
2. 30 mm glass-fibre-reinforced concrete
3. 22/80 mm larch shiplap boarding
4. 50 mm untreated larch sliding-folding shutters
5. Larch window, clear varnished



Vertical section of south facade

1. 22 mm industrial-quality parquet
2. 30 mm glass-fibre-reinforced concrete
3. 50 mm untreated larch sliding-folding shutters
4. Larch window, clear varnished
5. 30 mm diam. polished stainless-steel safety rail
6. 12 mm safety glass balustrade





The projects in this volume illustrate the latest tendencies in collective housing. Conventional vertical dwellings, buildings for specific groups and residential complexes share a common spirit: rigour, imagination and respect for both the persons who will occupy them and the environment in which they will be located. The works of Frank O. Gehry, Claus en Kaan Architecten, Santiago Calatrava, Shigeru Ban, Deadline, to name just a few of the architects included in this book, provide stimulating answers, ingenious solutions, unexpected points of view and proposals that will without doubt influence the conception of residential architecture in the century to come.

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